


# Effects of Role-Playing Scenarios on the Self-efficacy of Students in Resisting Against Substance Addiction: A Pilot Study

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Gülnaz Karatay, PhD, RN<sup>1</sup> and Nazan Gürarlan Baş, PhD, RN<sup>1</sup>

## Abstract

During the first phases of adolescent development, young people have little self-efficacy and resistance against substance use. The aim of this study was to demonstrate the effectiveness of role-playing scenarios on the self-efficacy of students in resisting substance use. A pre test and post test study design was used with a single group. The study was carried out with 245 secondary school students. The scenario-based training, developed by the researchers, was presented by the school counselors once a week for 4 weeks. For this purpose, a booklet of scenarios was prepared for the teachers. The role-playing scenarios were intended to improve adolescents' abilities to say "no" to substance offers, to prevent them from becoming addicted to certain substances, and to call for help if needed. The data of the study were collected using the Personal Information Form and the Self-Efficacy for Adolescents Protecting Substance Abuse Scale. The obtained data were assessed using percentages, chi-square, *t* test, and *F* test in the SPSS software. Results showed that, after the training, the mean score in the Self-Efficacy for Adolescents Protecting Substance Abuse Scale increased significantly ( $103.20 \pm 20.00$ ) compared with before the training ( $92.11 \pm 17.08$ ) ( $P < .05$ ). Short-term outcomes of the class-based scenario training were observed to be effective in the development of students' self-efficacy to resist the temptations of substance use.

## Keywords

adolescent, pilot study, role-playing, school health services, self-efficacy, substance addiction

## Introduction

During the first phases of adolescent development, youth are often exposed to several risky behaviors which can have life-long social and health-related consequences.<sup>1,2</sup> One of these behaviors involves is the experimental use of drug substances. A primary goal of public health officials is their commitment to the prevention of substance use among youth. A first step toward this goal is in the creation of interactive school programs for the 11 to 14 age group.<sup>2</sup> The rise of drug abuse in some countries, especially in Turkey, necessitates public health interventions to counteract this trend. According to the study conducted by Turkey Monitoring Centre of Drug and Drug Addiction ([TUBIM] 2014), 8.3% of high school students in Turkey were using cigarette, and 9.7% were using alcohol.<sup>3</sup>

Substance use patterns among young people are determined by many different factors. There is evidence that age, gender, family conflicts and poor relationships, peer pressure, and low self-esteem and self-efficacy can influence youth's decisions to smoke or use alcohol and other substances.<sup>2,4,5</sup> The epidemiological literature indicates that teenagers became involved in substance use at an early age, especially between 11 and 14 years. Young people in this age range have little self-efficacy and resistance against substance use and are often unable to resist peer pressure attempts to use various substances.<sup>6</sup>

It is important, therefore, to create educational programs for the 11 to 14 age group to prevent their introduction to substance use as much as possible.<sup>7</sup> Some studies show that schools are ideal settings for preventing substance usage among young people.<sup>8,9</sup> Substance and drug use prevention programs have been made part of the school curriculum for young people in most countries, and some programs have been successful in preventing substance use.<sup>10,11</sup> Most programs have focused on a life skills approach and the social influence model. Some studies found little or no evidence of the effectiveness of the life skills approach in preventing cigarette use especially in long terms.<sup>10,12-14</sup> A meta-analysis of Thomas et al<sup>8</sup> revealed that multimodel intervention and informative programs were not effective on the substance use; there were positive findings for social competence and combined social competence and social influences interventions.

<sup>1</sup>Munzur University, Tunceli, Turkey

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### Corresponding Author:

Gülnaz Karatay, Associate Professor, School of Health Science, Munzur University, Tunceli 62000, Turkey.  
Email: gkaratay@gmail.com



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Johnston et al<sup>15</sup> found that incentive programs have not been shown to prevent smoking initiation in the 11 to 14 age group. These study results indicate that the most effective school programs to prevent substance use among young people have not yet been developed. In Turkey, school-based substance abuse prevention programs are very limited, and the effectiveness of existing programs is not yet fully explored. Although social influence plays an important role of experimental use of substances, different social interaction programs had not been implemented to improve the self-efficacy of young people against substance use. Especially in Turkey, these kind of studies are very limited.

The self-efficacy of youth is an effective factor in preventing the use of harmful substances such as alcohol and cigarette. Bandura defines self-efficacy as the belief that one has the ability to cope effectively with high-risk situations.<sup>16</sup> The development of self-efficacy in children helps them to behave more rationally in the face of challenging life experiences. However, if children and youth have not developed a positive self-efficacy, which is associated with self-esteem, they may become more vulnerable to a negative or risky response to experiences which require a strong self-efficacy.<sup>17</sup> Individuals with low self-esteem have lower self-efficacy in resisting substance use.<sup>18</sup> Self-efficacy contributes to the ability of adolescents to resist pressure from the social environment to use addictive substances. Thus, its development must be reinforced and supported in both the home and school environments to help prevent substance use.

Scenario-based learning (SBL), which is a fast, engaging, and interactive learning method, can be used in developing self-efficacy and resistance against substance use in young people. SBL is an approach that encourages students to take an active, integrated, and inquiry-based approach to learning through the use of realistic scenarios that could be encountered in real life.<sup>19</sup> Scenarios may help students to build self-efficacy on how to behave in risky situations likely to be encountered in relation to substance use. In this study, it was tried to develop young people's self-efficacy against substance use with Role-Playing Scenarios (RPS). In this way, it was aimed to teach young people effective, fast, critical, and empathic ways of thinking with RPS for protection from substance usage.

## Purpose

The purpose of this study was to investigate the effect of RPS on the self-efficacy of secondary school students in resisting the temptations of substance use. The hypothesis of this study was as follows:

**Hypothesis 1:** A statistically significant difference was found between the Self-Efficacy for Adolescents Protecting Substance Abuse Scale (SEAPSAS) scores of the students before and after the intervention.

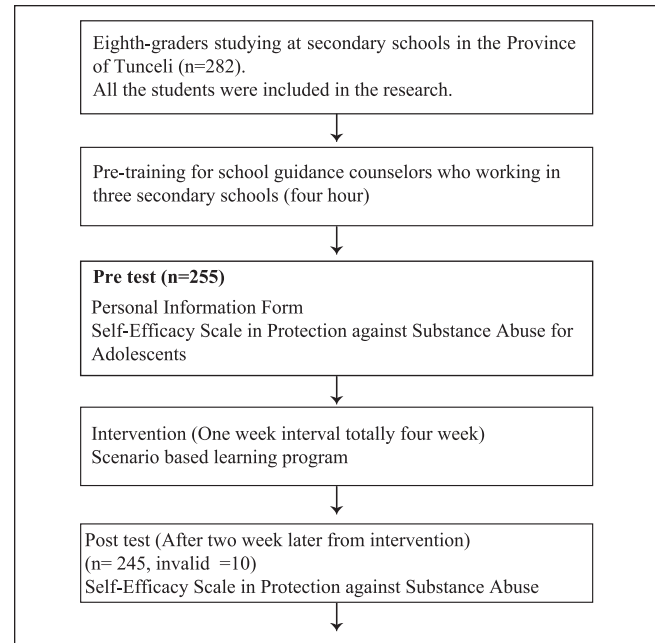


Figure 1. Flow chart.

## Methods

### Study Design

Pre-post test intervention trial with no control group design was used.

### Study Population and Sampling

The study population consisted of eighth graders studying at the secondary schools in the province of Tunceli. Considering the ethical principles and sensitivity of the subject, no sampling was taken from the study population, and all of the eighth graders (n = 282) were included in the study from 3 different secondary schools. Upon completion of the study, 255 students had attended all 4 sessions of the program (88% of the study population), but the questionnaires of 10 students were considered invalid due to incorrect filling of SEAPSAS. The study was completed with 245 students who participated in 4 sessions and also filled out both pretest and posttest appropriately (Figure 1). Sessions were planned on a class basis, and the capacity of the classes was ranged from 15 to 20.

### Data Collection Instruments

The data of the study were collected using the Personal Information Form and the SEAPSAS.

**Personal Information Form.** This form consists of 12 questions regarding descriptive and demographic characteristics of students, and 11 questions on their close circle's and

their cigarette and alcohol use status (a total of 23 questions). To evaluate close circle's cigarette and alcohol usage, questions regarding cigarette and alcohol use of family members and close friends were asked. Before the data collection, pretesting of Personal Information Form was carried out on 10 students, and then, some open-ended questions were reorganized.

**SEAPSAS.** The purpose of the scale, which was developed by Eker, Akkuş, and Kapisız, is to evaluate the self-efficacy perceptions of high school students regarding resisting substance abuse. The SEAPSAS was developed in Turkish Language, and there is no English version. The SEAPSAS was first applied to 9th, 10th, and 11th graders in 3 major high schools in the province of Düzce in Turkey. The scale was composed of 24 items with 4 factors and 1 control item. Regarding the experts' opinion, subscales were named as Staying Away From Drugs/Stimulant Drugs-General (12 items), Staying Away From Drugs/Stimulant Drugs-Under Pressure (4 items), Help-Seeking About Drugs/Stimulant Drugs (4 items), and Supporting a Friend About Drugs/Stimulant Drugs (3 items). For internal consistency reliability of the scale, the Cronbach alpha coefficient method was used. The Cronbach internal consistency coefficient of the whole scale was found to be 0.81. The internal consistency of subscales ranged from 0.45 to 0.87. The test-retest correlation was significant ( $P < .001$ ) and positively correlated. According to the scale, higher scores indicate higher self-efficacy in protection against substance abuse.<sup>20</sup> In the current study, the Cronbach alpha value was found to be 0.95.

### Data Collection

Study data were collected by the researchers either before or after the intervention program, depending on whichever was suitable for the students. A week before intervention, the pretest data were collected between November 20 and 25, 2015, using the Personal Information Form and the SEAPSAS. The posttest data were collected using SEAPSAS between January 11 and 15, 2016, 2 weeks after completion of the intervention program. Data collection tools were distributed to the students after the necessary explanations were made and collected again within 20 minutes. To get the correct answers during data collection, the purpose of the study was explained to students by researchers, and teachers were not allowed to be in the classrooms during data collection. Also the researchers did not check the questionnaires but only responded to the questions of students. Students needed approximately 20 minutes to answer all the questions.

### Implementation of the RPS

An instruction booklet was prepared by the researchers for the scenario-based activity to be carried out in a classroom environment. At the predesign stage of RPS, related information

was gathered, the aims of sessions were determined, and realistic scenarios were formed according to study objectives. During the creation of the scenarios, help was received from training programmers. After the scenarios were developed, appropriate questions were created to improve critical thinking skills of students related to protection from substance use. In the scenarios, a fictional story was created for the young people about the situations that may be encountered in everyday life. The scenario aimed to help them develop an awareness regarding how to behave, how to say "no" to invitations to substance use, and how to help themselves and close friends. These practice scenarios were used to improve the self-efficacy of the young study participants against the temptations of substance use. RPS activities were conducted with eighth graders in their classroom setting once a week for 4 weeks and at a suitable and prearranged hour. In this way, each student was to attend RPS sessions which were prepared by the researchers, each taking 40 to 50 minutes. The students to act in RPS were chosen among the volunteers. Each session consisted of an introductory activity (3-5 minutes), role-play (preparation 3-5 minutes; role-playing 10-12 minutes), a discussion of 2 subsequent scenarios (10-15 minutes), and summarization (3-5 minutes). The prepared scenarios were applied to the students by the school counselors who took 4 hours before training. To standardize the RPS program, the guide booklet with instructions was prepared for the school counselors. To ensure accuracy and completeness of presentation of the intervention, intermediate interviews were conducted with the guide teachers and process of the program was evaluated.

The content of the booklet with scenarios, which was prepared for teachers and students, included the following:

First session: Health/disease concept, our responsibilities about our health, and health-threatening situations.

Second session: Dangers of drug substances and how to stay away from addictive substances.

Third session: Rejecting addictive substances under peer pressure, phrases to say "no" to substance use offerings, and a "No to Substances" slogan contest.

Fourth session: To be able to be protected from addictive substances, and to be able to seek help for oneself and one's friends.

### Data Analysis

The findings of the study were evaluated with a computer-aided SPSS database. Percentiles were used for the descriptive data of students. The chi-square was used for the relationship between certain variables and cigarette and alcohol use. The  $t$  test was used for distribution of SEAPSAS scores, and the analysis of variance (ANOVA) was used to determine the relationship between certain variables and the distribution of SEAPSAS scores. Also it was seen that the students fall down from the study were similar to the intervention group in terms of some basic variables ( $P > .05$ ).

**Table 1.** The Distribution of the SEAPSAS, and Its Subscale Scores of Students Before and After the Training.

	Before intervention (mean $\pm$ SD)	After intervention (mean $\pm$ SD)	<i>t</i>	<i>P</i>	<i>N</i>
SEAPSAS mean score	92.11 $\pm$ 17.08	103.20 $\pm$ 20.00	6.374	.001	245
Staying Away From Drugs/Stimulants	51.97 $\pm$ 12.52	54.71 $\pm$ 11.67	1.91	.051	245
Staying Away From Drugs/Stimulants Under Pressure	17.34 $\pm$ 4.47	18.19 $\pm$ 4.31	2.268	.024	245
Help-Seeking About Drugs/Stimulant Drug	15.00 $\pm$ 5.06	15.57 $\pm$ 5.20	1.122	.223	245
Supporting a Friend About Drugs/Stimulant Drugs	11.14 $\pm$ 3.93	12.02 $\pm$ 3.56	2.672	.008	245

Note. SEAPSAS = Self-Efficacy for Protecting Adolescents From Substance Abuse Scale.

### Ethical Dimensions

To conduct the study, approval of the ethics committee (29077523-604.99-403) was obtained from the Firat University Non-Interventional Research Ethics Committee on February 12, 2015. Written permission was obtained from the Tunceli Governorship and Provincial Directorate for National Education. Furthermore, in accordance with the Declaration of Helsinki, students participated in the study as fully informed volunteers.

### Results

The results of this study, which aimed to help eighth graders develop self-efficacy in their ability to resist pressures to use addictive substances, are as follows.

Students' average age was  $13.53 \pm 0.57$ , and 51.4% of them were female. More than half of the students (57.8%) stated that their school grades were good, 4.4% stated they did poorly in school, and 93.2% stated that they live with their parents.

Of the students, 34.6% stated that there is at least 1 person who smokes in the family, 19.4% stated that they have friends who smoke occasionally, and 6.9% confirmed that they have friends who smoke regularly. In addition, 8.5% of students stated that they had tried cigarettes. The average age they had tried cigarettes was  $10.82 \pm 3.16$ , yet 35.2% disclosed that they had tried cigarette use when they were under the age of 10. Similarly, 7.0% of the students reported they had friends who drink alcohol, and 25% of them admitted they had tried alcohol, 33.3% revealed they had tried alcohol while under the age of 10, and 11.3% stated that they drink alcohol occasionally.

When we examine the distribution of SEAPSAS and its subscale scores of the students before ( $92.11 \pm 17.08$ ) and after the training ( $103.20 \pm 20.00$ ), there was a statistically significant ( $t = 6.374$ ,  $P = .001$ ) increase in total SEAPSAS scores after training. Furthermore, when we look at the subscales of SEAPSAS, the differences between pretest and posttest were statistically significant for avoiding drugs/psychotropic substances (before training =  $51.97 \pm 12.52$ , after training =  $54.71 \pm 11.67$ ,  $t = 1.917$ ,  $P = .051$ ), avoiding drugs/psychotropic substances under pressure (before training =  $17.34 \pm 4.47$ , after

training =  $18.19 \pm 4.31$ ,  $t = 2.268$ ,  $P = .024$ ), supporting friends about drugs/psychotropic substances (before training =  $11.14 \pm 3.93$ , after training =  $12.02 \pm 3.56$ ,  $t = 2.672$ ,  $P = 0.008$ ) subscales. The difference was not significant in the seeking help about drugs/psychotropic substances subscale (before training =  $15.00 \pm 5.06$ , after training =  $15.57 \pm 5.20$ ,  $t = 1.122$ ,  $P = .223$ ; Table 1).

The relationship between the pretest and posttest SEAPSAS scores with some variables was evaluated. The difference of the scores was found to be not statistically significant in terms of gender ( $F = 2.473$ ,  $P = .117$ ) and school success ( $F = 2.029$ ,  $P = .134$ ); however, it was determined that the self-efficacy of students who had not tried cigarette use ( $F = 10.527$ ,  $P = .001$ ) and alcohol ( $F = 3.282$ ,  $P = .051$ ), had smoker friends ( $F = 4.177$ ,  $P = .042$ ), and had parental smoking ( $F = 12.660$ ,  $P = .001$ ) was higher than that of the others (Table 2).

### Discussion

The current study aimed to investigate the effects of SBL activities on the self-efficacy of secondary school students to strengthen their resolve against the perils of substance use. Our study results found that the intervention helped students to develop self-efficacy to protect themselves and their friends from substance use. However, the study period of 4 sessions and the evaluation of short-term results were the limitations of this study. For the study was a pre-post test design, the absence of a control group was the other limitation of the study. Even if these limitations reduce generalizability of the study, obtained data can be generalized to groups which have similar substance use pattern. Nevertheless, a follow-up study is planned to reassess substance use status of the students.

This study found that there was at least 1 substance user in the family of one-third of the students and among close friends of one-fifth of them. Approximately one-tenth of the students stated that they had tried cigarette use, and the average age when students began cigarette usage was calculated to be  $10.82 \pm 3.16$ . The current study results also determined that the average age for students when they were introduced to cigarette use was lower than some studies. An Iranian study found the age of a first cigarette use experience to be 14.35 years.<sup>21</sup> In another study carried out in the United



**Table 2.** The Relationship of SEAPSAS Pre Test and Post Test Scores Difference with Some Variables.

	SEAPSAS score difference (post test – pre test) (mean ± SD)	$t^a, F^b$	P
Gender <sup>a</sup>			
Female	8.40 ± 24.41	2.473	.117
Male	13.87 ± 27.68		
Smoking status <sup>a</sup>			
Tried	6.8 ± 36.23		
Not tried	10.99 ± 24.48	10.527	.001
Alcohol use status <sup>a</sup>			
Tried	5.53 ± 27.96	3.282	.051
Not tried	12.63 ± 25.16		
Smoking habit of close friends <sup>a</sup>			
Have smoker friends	5.00 ± 30.32		
Have no smoker friend	13.06 ± 24.31	4.177	.042
Perceived school achievement <sup>b</sup>			
Poor	3.00 ± 32.38	2.029	.134
Medium	9.37 ± 27.42		
Good	13.08 ± 24.55		
Parental smoking <sup>a</sup>			
Yes	6.59 ± 27.39	12.660	.001
No	19.40 ± 21.67		

Note. SEAPSAS = Self-Efficacy for Adolescents Protecting Substance Abuse Scale.

<sup>a</sup>t test.

<sup>b</sup>Analysis of variance.

States,<sup>22</sup> 34.4% of the substance users had begun using substances before the age of 16. Approximately one-eighth of the students in this study stated that they had tried cigarette before 10 years of age, and this poses an important issue for Turkey. There is accumulating evidence showing that the initiation of substance use early in life contributes to higher levels of use and abuse later in life.<sup>23,24</sup> Early onset is also associated with negative health, social, and behavioral outcomes. Also in Turkey, cigarette usage rates of young girls are increasing day by day. As noted with self-efficacy scores of this study, the difference of trying cigarette use between the male and female students was decreased. Therefore, preventing early-onset cigarette and alcohol use or delaying the onset of use must be primary goals of a prevention program in Turkey. It is important to develop these programs with gender-sensitive perspective. Secondary school age students are most often targeted in prevention efforts because the 11 to 15 age period is when substance use experimentation often begins.

One of the most feasible and ideal settings to target the prevention of substance use among young people seems like a school-based approach and intervention.<sup>7</sup> But some earlier school-based drug prevention programs have shown limited effects for some substances.<sup>8,25</sup> Some of these differences stem from the methodology. In this study, SBL activities were used to help young people develop self-efficacy and resistance against substance use. The self-efficacy status of

young people is decisive for resisting the use of substances, peer pressure, and seeking help as necessary.<sup>20</sup> High self-efficacy allows young people to be more confident in their decision-making abilities. A positive self-efficacy in adolescents is a factor which can protect them from harmful influences and may strengthen their self-esteem to refuse cigarette offers, alcohol, and other drugs.<sup>26</sup> This study's findings showed students' self-efficacy scores in protection against substance use increased significantly after the intervention. However, we are not able to compare this figure with other studies as there are few studies in Turkey on the level of self-efficacy in young people related to the prevention of substance use. In addition, the results of studies in the international literature differ. In a study by Maruska et al,<sup>27</sup> school-based programs were found to help students to develop skills to resist substance use. In another study,<sup>9</sup> the school-based short-term educational intervention programs were found to be effective for preventing and reducing tobacco use among Indian adolescents. In a study by Isensee et al,<sup>14</sup> a school-based program was found to have a minimal effect on smoking behavior, whereas its effect on knowledge and attitudes was found to be moderate. However, the self-efficacy of substance users was observed to be lower in general.<sup>28</sup>

Evidence-based interventions are needed while health services, especially school health services, are planned in Turkey. With this pilot study, the short-term effects of SBL

were assessed to protect young people from substance abuse; the findings of this study indicated that the short-term effects of the scenario-based role-play activities held with eighth graders for 4 weeks were helpful in developing a higher level of self-efficacy to protect students from the temptations of substance abuse. Our recommendation is to extend this program to fifth and sixth graders as well. Also, long-term effects of the program should be investigated in larger samples and in different cultural groups. After the effectiveness of this program has been demonstrated in different studies, it can be suggested that it be added to school curriculum at local level. Also, while preventive health services are planned for young people, more enjoyable and different methods should be tried instead of traditional approaches, such as SBL.

### Declaration of Conflicting Interests

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### References

- Gullone E, Moore S. Adolescent risk-taking and the five-factor model of personality. *J Adolesc.* 2000;23:293-307.
- Mayberry ML, Espelage DL, Koenig B. Multilevel modeling of direct effects and interactions of peers, parents, school, and community influences on adolescent substance use. *J Youth Adolesc.* 2009;38:1038-1049.
- TUBİM (Türkiye Uyuşturucu ve Uyuşturucu Bağımlılığı İzleme Merkezi-Turkey Monitoring Centre of Drug and Drug Addiction) Turkish drug report. [http://eos.aeo.org.tr/userfiles/files/230\\_2014-Turkiye-Uyusturucu-Raporu-Hakkinda.pdf](http://eos.aeo.org.tr/userfiles/files/230_2014-Turkiye-Uyusturucu-Raporu-Hakkinda.pdf) Published 2014. Accessed March 4, 2016.
- Centers for Disease Control and Prevention (CDC). Youth and tobacco use. [http://www.cdc.gov/tobacco/data\\_statistics/fact\\_sheets/youth\\_data/tobacco\\_use/](http://www.cdc.gov/tobacco/data_statistics/fact_sheets/youth_data/tobacco_use/). Published 2015. Accessed March 4, 2016.
- Jorge KO, Cota LO, Ferreira EF, do Vale MP, Kawachi I, Zarzar PM. Tobacco use and friendship networks: a cross-sectional study among Brazilian adolescents. *Cien Saude Colet.* 2015;20:1415-1424.
- Varela A, Pritchard ME. Peer influence: use of alcohol, tobacco, and prescription medications. *J Am Coll Health.* 2011;59:751-756.
- Chakravarthy B, Shah S, Lotfipour S. Adolescent drug abuse—awareness and prevention. *Indian J Med Res.* 2013;137:1021-1023.
- Thomas RE, McLellan J, Perera R. School-based programmes for preventing smoking. *Cochrane Database Syst Rev.* 2013;(4):CD001293.
- Verma A, Muddaiah P, Krishna Murthy A, Sanga R. Exploring an effective tobacco prevention programme for Indian adolescents. *Public Health.* 2015;129:23-28.
- Wen X, Chen W, Gans KM, et al. Two-year effects of a school-based prevention programme on adolescent cigarette smoking in Guangzhou, China: a cluster randomized trial. *Int J Epidemiol.* 2010;39:860-876.
- Faggiano F, Minozzi S, Versino E, Buscemi D. Universal school-based prevention for illicit drug use. *Cochrane Database Syst Rev.* 2014;(12):CD003020.
- Luna-Adame M, Carrasco-Giménez TJ, Rueda-García Mdel M. Evaluation of the effectiveness of a smoking prevention program based on the “Life Skills Training” approach. *Health Educ Res.* 2013;28:673-682.
- Teesson M, Newton NC, Barrett EL. Australian school-based prevention programs for alcohol and other drugs: a systematic review. *Drug Alcohol Rev.* 2012;31:731-736.
- Isensee B, Hansen J, Maruska K, Hanewinkel R. Effects of a school-based prevention programme on smoking in early adolescence: a 6-month follow-up of the “Eigenständig werden” cluster randomised trial. *BMJ Open.* 2014;4:e004422.
- Johnston V, Liberato S, Thomas D. Incentives for preventing smoking in children and adolescents. *Cochrane Database Syst Rev.* 2012;10:CD008645.
- Bandura A. Self-efficacy: toward a unifying theory of behavioral change. *Psychol Rev.* 1977;84:191-215.
- Kadden RM, Litt MD. The role of self-efficacy in the treatment of substance use disorders. *Addict Behav.* 2011;36:1120-1126.
- Tse S, Zhu S, Yu CH, Wong P, Tsang S. An ecological analysis of secondary school students’ drug use in Hong Kong: a case-control study. *Int J Soc Psychiatry.* 2016;62:31-40.
- Clark R. *Accelerating Expertise With Scenario Based Learning.* Learning Blueprint. Merrifield, VA: American Society for Teaching and Development; 2009.
- Eker F, Akkuş D, Kapisız Ö. The development and psychometric evaluation study of self-efficacy for protecting adolescents from Substance Abuse Scale. *J Psy Nurs.* 2013;4:7-12.
- Khajehdaluae M, Zavar A, Alidoust M, Pourandi R. Smoking among high school students of an area with medium socioeconomic status. *J Pak Med Assoc.* 2014;64:291-295.
- Moss HB, Chen CM, Yi HY. Early adolescent patterns of alcohol, cigarettes, and marijuana polysubstance use and young adult substance use outcomes in a nationally representative sample. *Drug Alcohol Depend.* 2014;136:51-62.
- Hemovich V, Lac A, Crano WD. Understanding early-onset drug and alcohol outcomes among youth: the role of family structure, social factors, and interpersonal perceptions of use. *Psychol Health Med.* 2011;16:249-267.
- Luciana M, Ewing SWF. Introduction to the special issue: substance use and the adolescent brain: developmental impacts, interventions, and longitudinal outcomes. *Dev Cogn Neurosci.* 2015;16:1-4.
- Faggiano F, Vigna-Taglianti F, Burkhart G, et al; EU-Dap Study Group. The effectiveness of a school-based substance abuse prevention program: 18-month follow-up of the EU-Dap cluster randomized controlled trial. *Drug Alcohol Depend.* 2010;108:56-64.
- Alavi HR. The role of self-esteem in tendency towards drugs, theft and prostitution. *Addict Health.* 2011;3:119-124.
- Maruska K, Hansen J, Hanewinkel R, Isensee B. The role of substance-specific skills and cognitions in the effectiveness of a school-based prevention program on smoking incidence. *Eval Health Prof.* 2016;39:336-355.
- Smorti M. Sensation seeking and self-efficacy effect on adolescents risky driving and substance abuse. *Soc Behav Sci.* 2014;140:638-642.