

Self-efficacy and Drug-seeking Behaviors in High School Students in Southern Iran

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Abstract

Background: The tendency to the use of drugs is a daily increase, especially among adolescents. We conducted the present study to investigate the role of self-efficacy in predicting drug-seeking behaviors among high school students in Jahrom, Fars province, Iran.

Methods: This cross-sectional study was performed on high school students in Jahrom, Fars province, Iran in 2020. The sample size was estimated to be 405 people who were chosen using multi-stage cluster sampling. The data collection tools here included demographic information questionnaire, Iranian Addiction Potential Scale, and self-efficacy questionnaire Children Scale. Data analysis was performed with SPSS version 21 using descriptive statistics and Pearson's correlation coefficient, Independent t-test, One-way ANOVA, and Linear regression.

Results: There was a significant inverse correlation between self-efficacy and drug-seeking behaviors ($r=-.598$, $P<0.001$). Additionally, the results revealed a relationship between grade, father's job, mother's education, and smoking history in friends and parents with self-efficacy ($P=0.002$, $P=0.012$, $P=0.004$, $P=0.006$, $P=0.005$, respectively) and drug-seeking behaviors ($P<0.001$). Father's job, friends' smoking history, and self-efficacy were significant factors inversely associated with drug-seeking behaviors ($P=0.003$, $P<0.001$, $P<0.001$, respectively).

Conclusion: High levels of self-efficacy of students and educated families can play a protective role against drugs use. Further focus on prevention, especially on capacity building and the empowerment of young people can reduce the tendency to use drugs.

Keywords: Students, Self-efficacy, Drug-seeking behavior, Adolescent

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1. Introduction

In the early stages of development, adolescents are often exposed to high-risk behaviors, including drug use, which can have lasting detrimental effects on their health and social life (1). The tendency to use drugs is increasing daily, particularly among adolescents. Over the recent years, in addition to opium, the use of new types of drugs, especially ecstasy, and methamphetamines, has complicated drug tendency in Iran (2). Drug abuse is on the rise in many parts of the world. The United Nations Office on Drugs and Crime (UNODC) reported in 2017 that at least 271 million people worldwide (5.5% of the world's population) between the ages of 15 and 64 have used drugs (3). Due to the existence of the Golden Triangle and the Golden Crescent of drug production and trafficking, neighboring Asian countries are more affected by the adverse effects of drugs (4, 5). Indonesia has estimated drug abuse to be 2.2% of the population, consisting of mostly high school and college students (6). The

prevalence of substance abuse among the younger generation has risen sharply in India, one out of three male students and one out of 10 female students have used drugs (7). There are about 5 million drug users in Bangladesh, 91% of whom are young people and adolescents (8). In Iran, the prevalence of drug abuse is estimated at 1.6%. Although the use of opium and cannabis has traditionally been common in Iran, over the recent years, it has become more common to use heroin and crystal methamphetamine (9). According to a survey in Iran, 2.2% of high school students had used drugs at least once (10). Self-efficacy is a person's perception of competence and ability to organize and perform the actions needed to manage expected situations (11, 12). Life satisfaction is higher in people with higher self-efficacy (12) whereas poor self-efficacy causes people to be unable to cope with problems (13). In fact, this ability is a protective factor against substance use (14). Scientific evidence in Iran has reported low levels of self-confidences and self-efficacy as a major factor in the tendency to drug use among adolescents

(14-16). Abdollahi and colleagues found a relationship between self-efficacy and the first drug abuse (17). Due to the increasing tendency to use a variety of traditional and new drugs in young people and the discovering the youth behavior in the face of these drugs, we decided to conduct this study in the city of Jahrom; therefore, the present work aimed to investigate the role of self-efficacy in predicting drug-seeking behaviors among high school students in Jahrom, Fars province, Iran.

2. Methods

This cross-sectional study was performed on high school students in Jahrom in 2020. A total of 390 individuals were considered for the sample size according to $r=0.2$ in the paper by Shafikhani and colleagues (18) (power 80%, type I error (α) 5%, 95% confidence level, and $c=0.2$).

$$n = \left[\frac{Z_{\alpha} + Z_{\beta}}{c} \right]^2$$

$$c = 0.5 * Ln[(1+r)/(1-r)]$$

During the study period, a total of 405 individuals were visited. The participants were selected using a multistage cluster random sampling approach. The city of Jahrom was divided into four regions: north, south, east, and west, and from each region, a male's high school and a female's high school (a total of eight schools) were selected. Subsequently, 17 samples from each educational level (9th, 10th, 11th, and 12th grade) of each secondary school were randomly selected.

The inclusion criteria were all the male and female students of 9th, 10th, 11th, and 12th grade in Jahrom schools. The exclusion criteria included dissatisfaction with participating in the study and incomplete completion of the questionnaires.

Data collection tools included demographic information questionnaire (including age, gender, grade, parents' job, parents' education, number of children in the family, a smoking history of friends and parents), Iranian Addiction Potential (IAPS) Scale, and self-efficacy questionnaire-Children (SEQ-C) Scale. IAPS consists of two factors, namely 36 questions, and five lie detector questions. It assesses two factors: active potential, passive potential. Each question is scored on a continuum from zero (strongly agree) to 3 (strongly disagree). Of course, this scoring method is reversed in the lie detection factor, which includes

questions 12, 13, 15, 21, and 33. To get the total score, the sum of the question scores (excluding the lie scale) are added. This score will range from 0 to 108. The construct validity of the questionnaire was confirmed by correlating it with the 25-item scale of the list of clinical signs. In order to assess the content validity, 10 experts were asked to review the questionnaire and then the content validity ratio (CVR) and content validity index (CVI) were determined; the values of $CVR=0.77$ and $CVI=0.87$ were calculated (19, 20). In the study by Sajadi and colleagues, Cronbach's alpha values in active potential, passive potential, and total scale were reported to be 0.85, 0.70, and 0.87 (21). In the present study, Cronbach's alpha values on 30 students were calculated to be 0.72, 0.77, and 0.84, respectively. SEQ-C with 23 items has been prepared measuring the self-efficacy of children and adolescents in three areas of educational, emotional, and social scales. The scoring method of this questionnaire is from very high with a score of 5 to not at all with a score of 1. The scores range from 23 to 115 for the overall self-efficacy, from 8 to 40 for social and academic self-efficacy, and from 7 to 35 for emotional self-efficacy (22). The questionnaire was distributed among 10 experts to determine content validity. To confirm the CVR, the calculated ratios for each item were compared with the table number provided by Lawshe, and if the values obtained were greater than the table values, the content validity ratio was confirmed. Moreover, the items with calculated CVI values above 0.7 were approved for retention in the questionnaire. In total, the CVR and CVI values of the questionnaire were calculated as 0.82 and 0.90, respectively. Internal consistency coefficient was calculated for social self-efficacy of 0.66, emotional self-efficacy of 0.84, and academic self-efficacy of 0.74; for the whole scale, it was 0.73. The reliability of the questionnaire with test-retest was calculated for social self-efficacy, academic self-efficacy, and emotional self-efficacy to be 0.81, 0.87, and 0.88, respectively (23); in the present study, Cronbach's alpha values on 30 students were calculated to be 0.81, 0.81, and 0.79, respectively.

All the participants were informed about the research and completed the consent form. The research was under supervision of Vice Chancellor for Research, Jahrom University of Medical Sciences. The questionnaires were then given to the participants and completed in the presence of the researchers. Data analysis was performed via SPSS version 21 using descriptive statistics and Pearson's correlation coefficient, Independent t-test, One-way ANOVA, and Linear regression.

3. Results

The number of participants in the study was 405. According to the findings, regarding drug-seeking behavior, 256 (63.2%) students had a low level, 108 (26.7%) had a medium level, and 41 (10.1%) had a high level of it. The mean scores of self-efficacy, academic self-efficacy, social self-efficacy, and emotional self-efficacy were 86.03 ± 13.00 , 32.04 ± 5.31 , 30.18 ± 5.19 , 23.80 ± 5.68 , respectively. Their mean age was 16.34 ± 1.61 . Their parents were mostly self-employed or housewife. Smoking history was 6.4% in friends and 9.6% in parents. The education of the parents of the majority of them was diploma or lower (Table 1).

The results of Pearson correlation coefficient showed a significant inverse correlation between self-efficacy and drug-seeking behaviors leading to addiction ($r = -0.598$, $P < 0.001$). As the self-efficacy score increased, the tendency towards addiction decreased. There was also a significant inverse correlation between the dimensions of self-efficacy (social self-efficacy, academic self-efficacy, and emotional self-efficacy) and preparedness for addiction ($P < 0.001$) (Table 2).

The results revealed a relationship between grade, father's job, mother's education, as well as smoking history in the students' friends and parents with

self-efficacy ($P = 0.002$, $P = 0.012$, $P = 0.004$, $P = 0.006$, $P = 0.005$, respectively) and drug-seeking behaviors ($P < 0.001$). The highest self-efficacy was observed in the 9th grade students. The highest self-efficacy and the lowest drug-seeking behaviors belonged to the 10th grade students. The highest self-efficacy and the lowest drug-seeking behaviors were observed in those with retired fathers. The participants with mothers with college education indicated the highest self-efficacy and the lowest drug-seeking behaviors. Furthermore, the lowest self-efficacy and the highest preparedness for addiction belonged to those with a history of smoking in friends and parents (Table 3).

Among the demographic variables, gender, grade, and the father's job were more significantly effective ($P < 0.05$). Self-efficacy was higher in female students than that in male students and their self-efficacy decreased with the increase in grade and if they had unemployed fathers (Table 4).

The regression results showed that demographic and self-efficacy variables could explain 45.1% of the variance changes in the students' drug-seeking behaviors. The effect of the mother's job, mother's education, father's education, friends' smoking history, and self-efficacy on the students' drug-seeking behaviors was significant and inverse ($P < 0.05$). Accordingly, with the increase

Table 1: Frequency of demographic variables of the students participating in the study

Variable	N (%)	Variable	N (%)		
Gender	Male	203 (50.1)	Smoking history of student	Yes	12 (3.0)
	Female	202 (49.9)		No	393 (97.0)
Grade	9th	131 (32.3)	Smoking history of friends	Yes	43 (10.6)
	10th	106 (26.2)		No	362 (89.4)
	11th	102 (25.2)	Smoking history of parents	Yes	48 (11.9)
	12th	66 (16.3)		No	357 (88.1)
Father's job	Unemployed	13 (3.2)	Number of children in the family	0	2 (0.5)
	Self-employed	231 (57.2)		1	41 (10.2)
	Employee	128 (31.7)		2	160 (39.7)
	Retired	32 (7.9)		3	109 (27.0)
Mother's job	housewife	307 (76.0)		4	46 (11.4)
	Self-employed	10 (2.5)	>=5	45 (11.2)	
Father's education	Illiterate	10 (2.5)	Mother's education	Illiterate	10 (2.5)
	Elementary	63 (15.6)		Elementary	67 (16.6)
	Middle	76 (18.8)		Middle	49 (12.2)
	Diploma	100 (24.7)		Diploma	128 (31.8)
	College	156 (38.5)		College	149 (37)
			Age		16.34 ± 1.61

Table 2: Correlation between self-efficacy and drug-seeking behaviors

Variable	Self-efficacy	Social self-efficacy	Academic self-efficacy	Emotional self-efficacy
Drug-seeking behaviors	$r = -0.598$ $P < 0.001$	$r = -0.324$ $P < 0.001$	$r = -0.537$ $P < 0.001$	$r = -0.570$ $P < 0.001$

Table 3: Mean±SD of self-efficacy and drug-seeking behaviors scores based on demographic variables

Variable		Self-efficacy		Drug-seeking behaviors	
		M±SD	P	M±SD	P
Gender	Male	86.00±14.16	0.96*	29.15±17.88	0.03*
	Female	86.06±11.77		34.12±15.94	
Grade	9th	88.30±13.53	0.002**	26.68±16.67	<0.001**
	10th	87.83±12.94		29.34±15.52	
	11th	83.04±11.06		37.38±15.93	
	12th	83.27±13.68		36.24±18.63	
Father's job	Unemployed	77.00±17.16	0.01**	43.23±25.11	<0.001**
	Self-employed	86.21±12.93		33.82±17.00	
	Employee	85.69±11.93		27.59±14.70	
	Retired	90.81±13.15		26.22±17.65	
Mother's job	Housewife	85.35±12.69	0.05**	32.62±17.41	0.06**
	Self-employed	93.20±16.48		31.50±18.27	
	Employee	88.01±12.99		27.77±15.11	
Father's education	Illiterate	76.90±25.02	0.08**	39.40±32.83	0.002**
	Elementary	83.90±13.57		34.75±17.84	
	Middle	86.21±11.80		36.09±17.92	
	Diploma	86.18±12.08		31.17±15.10	
	College	87.29±12.71		27.99±15.49	
Mother's education	Illiterate	72.10±25.43	0.004**	45.80±33.09	<0.001**
	Elementary	86.97±10.94		33.03±15.48	
	Middle	84.65±11.90		36.59±19.08	
	Diploma	85.45±12.71		31.78±16.74	
	College	87.68±12.83		28.09±15.02	
Number of children in the family	0	96.50±26.16	0.41**	32.00±45.25	0.06**
	1	87.63±12.17		29.46±19.73	
	2	86.17±12.21		29.60±15.58	
	3	85.77±13.25		31.84±16.09	
	4	82.78±10.99		35.17±14.26	
	>= 5	86.80±16.53		37.60±21.79	
Smoking history of friends	Yes	80.86±15.04	0.006*	46.84±20.44	<0.001*
	No	86.65±12.62		29.82±15.74	
Smoking history of parents	Yes	81.15±14.70	0.005*	44.42±20.86	<0.001*
	No	86.69±12.64		29.91±15.79	

*Independent t-test; **One-way ANOVA

in self-efficacy, this behavior decreased among the students (Table 5).

4. Discussion

Our results revealed the strong inverse correlation between self-efficacy and its dimensions (social self-efficacy, academic self-efficacy, and emotional self-efficacy) with preparedness for addiction. Studies by Fooladvand and colleagues (14), Elliott and colleagues (24), and Engels and colleagues (25) reported similar results. In addition, the results of O'Brien and colleagues (26) and Allahverdipour and colleagues (27) indicated that self-efficacy is inversely related to the tendency to use drugs in adolescents. Self-efficacy affects a person's performance in a variety of topics; thus, adolescents'

tendency to use substances is influenced by their beliefs about self-efficacy. People with high self-efficacy are courageous and have a high self-esteem, which has a significant impact on the evaluation of situations and behaviors (28, 29). It can be said that adolescents with high self-efficacy show more stability facing undesirable and stressful events and do not accept negative thoughts about themselves and their abilities. Accordingly, the feeling of self-efficacy helps teenagers to avoid drugs and substances and control their behaviors. People usually feel frustrated when they fail to achieve their goals in life due to their inefficiency, and this negative emotion can lead them to use drugs.

The present study showed that students with a history of smoking in friends and parents have lower

Table 4: Factors affecting self-efficacy using linear regression model

Variable	Category	B	SE	Standardized coefficients Beta	t	P
Age	-	0.38	10.55	0.049	0.76	0.44
Gender	Female	3.78	0.51	0.14	2.38	0.01
	Male	0	-	-	-	-
Grade	-	-2.50	1.58	-0.21	-3.06	0.002
Father's job	Unemployed	-10.92	3.53	-0.15	3.09	0.002
	Employee	-0.52	1.41	0.09	-.037	0.71
	Retired	4.60	2.41	0.09	1.90	0.058
	Self-employed	0	-	-	-	-
Mother's job	Housewife	2.25	1.57	0.07	1.43	0.15
	Self-employed	-5.86	4.32	-0.07	-1.35	0.17
	Employee	0	-	-	-	-
Father's education	Illiterate	2.31	4.25	0.02	0.54	0.58
	Elementary	0.95	1.94	0.02	0.49	0.62
	Middle	0.013	1.82	0.004	0.07	0.93
	Diploma	2.15	1.67	0.07	1.28	0.19
	College	0	-	-	-	-
Mother's education	Illiterate	2.79	4.26	0.03	0.65	0.51
	Elementary	0.03	1.92	0.01	0.17	0.86
	Middle	0.59	2.15	0.01	0.27	0.78
	Diploma	2.01	1.57	0.07	1.27	0.20
	College	0	-	-	-	-
Number of children in the family	-	0.055	0.84	0.005	0.090	0.92
Smoking history of friends	Yes	2.34	0.48	0.05	0.68	0.49
	No	0	-	-	-	-
Smoking history of parents	Yes	2.01	3.43	0.05	0.62	0.53
	No	0	-	-	-	-

Gender Code: Male 1, Female 2; Method: Enter method regression

self-efficacy and a higher preparedness for addiction. According to Fooladvand, self-efficacy help adolescents to resist peer pressure to use drugs, and is effective in controlling their behaviors (30). Geramian and colleagues identified peer pressure and lower levels of self-confidence as the main causes of drug abuse in adolescents (15). The effect of high-risk parental behaviors on adolescents is associated with several negative social and health-associated complications. Children of parents who use drugs are at a greater risk of behavioral problems, including drug abuse (24, 31) accessibility of lottery products, and lottery playing behaviour amongst 1,072 youth (ages 10-18 years old, mean age 14 years-old). It is reasonable to say that the existence of high-risk behaviors related to health in parents affects the personality of adolescents during their development and reduces their self-confidence and self-efficacy. Furthermore, the pressure from social groups, especially peers, reduces students' self-efficacy and increases their desire to start using drugs.

The findings herein also implied that the preparedness for addiction was lower in the students

with employee and retired fathers. Additionally, the participants with mothers with college education had the highest self-efficacy and the lowest preparedness for addiction in students. Familial supports as well as the high level of parents' social skills are highly effective in adolescents' lack of addiction to drugs. The high level of parents' education can also affect the child's behavior and protect them against drug addiction. In this regard, parental divorce, family conflicts, and child neglect have always been among the effective factors in adolescent addiction. We also found that the effect of gender on self-efficacy was direct and significant and self-efficacy was higher in the female students than that in the male students. In the study by Karatay and Baş, lower self-efficacy was reported in male students, and those with poor family support and friendships had positive history of drug use and experienced traumatic events (32).

One of the limitations of this study was the difficulty of getting the cooperation of the Department of Education to conduct this research due to the sensitivity of the issue of addiction in students. Furthermore,

Table 5: Factors affecting drug-seeking behaviors using linear regression model

Variable	Category	B	SE	Standardized coefficients Beta	t	P
Age	-	0.17	13.02	0.01	0.34	0.73
Gender	Female	3.97	0.63	0.11	2.45	0.01
	Male	0	-	-	-	-
Grade	-	0.50	1.95	0.03	0.60	0.54
Father's job	Unemployed	34.87	2.20	0.37	15.70	<0.001
	Employee	22.38	0.88	0.60	25.13	<0.001
	Retired	46.36	1.52	0.73	30.47	<0.001
	Self-employed	-	-	-	-	-
Mother's job	housewife	-11.18	1.99	-0.28	-5.62	<0.001
	Self-employed	-21.87	5.47	-0.19	-3.99	<0.001
	Employee	0	-	-	-	-
Father's education	Illiterate	-12.84	5.01	-0.11	2.56	0.01
	Elementary	-15.79	2.25	-0.33	-6.88	<0.001
	Middle	-16.34	2.15	-0.37	-7.60	<0.001
	Diploma	-15.27	1.97	-0.38	-7.75	<0.001
	College	0	-	-	-	-
Mother's education	Illiterate	-4.85	5.37	-0.04	-0.90	0.36
	Elementary	-12.58	2.42	-0.27	-5.19	<0.001
	Middle	-9.11	2.71	-0.17	-3.36	0.001
	Diploma	-9.40	1.98	-0.25	-4.74	<0.001
	College	0	-	-	-	-
Number of children in the family	-	0.990	1.04	0.067	1.60	0.11
Smoking history of friends	Yes	-13.10	0.59	-0.23	-3.77	0.001
	No	0	-	-	-	-
Smoking history of parents	Yes	-0.14	4.23	-0.003	-0.04	0.96
	No	0	-	-	-	-
Self-efficacy	-	-0.71	3.97	-0.53	-13.81	0.001

Method: Enter method regression

given the fact that there were some questions about tobacco and drug use among the students and those around them, it is highly probable that the answers are not honest. Therefore, the participants completed the questionnaires in the presence of the researcher so that the confidentiality of information could be justified.

5. Conclusion

High levels of self-efficacy in students and educated families can play a protective role against drugs use. Further focusing on prevention, especially on capacity building and the empowerment of young people, can reduce their tendency to use drugs. Increasing the awareness of students, parents, and teachers plays an important role in preventing substance abuse. The student social care system, self-care, social participation, home-school cooperation, life skills training, and parenting practices are some of the widely proposed activities in this field. Another useful measure to combat youth addiction to drugs is cross-sectoral coordination between relevant organizations,

including education, law enforcement, the Ministry of Health, the municipality, and non-governmental organizations. The authors of this article could highly recommend conducting research studies using the scientific and practical experiences of countries that have succeeded in the fight against drugs. Moreover, it is suggested to use Bandura's four strategies to improve the level of self-efficacy of students, thereby reducing their preparedness for addiction.

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Ethical Approval

The Ethics Review Board of Jahrom University of Medical Sciences, approved the present study with the following number: IR.JUMS.REC.1397.097. Also, all the participants were informed about the research and completed the consent form.

Conflicts of interest: None declared.

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