Original Article

The effect of preventive psycho-social program on self-control skills and social problem solving among Iranian students

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ABSTRACT

Objective: Today, preventing drug use by teenagers is one of the necessary measures in most of societies. Evidence suggest that there is an association between the skills level and reduced inclination to use drugs. Therefore, the present study examines the effect of psycho-social empowerment program on the self-control skills and solving social problems among Iranian students. Methodology: This study is a quasi-experimental survey conducted on 380 students at the age range of 14-16 years who are living in Malard (Iran) during 2014-2015. The samples are chosen through cluster random sampling, and 11 sessions of teaching psycho-social empowerment program are conducted during 70 days so as study the effects of teaching on self-control and social problem solving skills. The collected data is analyzed through covariance test. Findings: Data analysis shows that the scores of test group is significantly ($p<0.05$) more than that of control group in both variables including self-control and social problem solving. Discussion: According to the findings, offering psycho-social empowerment program is effective in promoting the efficiency of students and increasing their social problem solving and self-control skills. This program can be used as an effective method in increasing the performance of adolescents and preventing inclination to use drug at schools.

Keywords: Prevention, drugs, social problem solving, self-control, teenagers

Introduction

According to the statistics published by the Office on Drugs and Crime (UNODC) within the World Health Organization (WHO), it is estimated that 167 to 315 million people (15 to 64 years old) used drugs in 2011. These statistics are equivalent to 3.6 to 6.9% of the adult population in the world [1]. The studies suggested that 11% of families in Tehran are involved in drug use while 11% of students in universities ran by Ministry of Science were professional drug consumers [2].

Different estimations indicate that one million [3] up to one million and eight hundred thousand Iranian citizens [4, 5] are addicted to different kinds of drugs. Moreover, 700,000,000 dollars is annually spent on closing eastern borders of Iran against drug transit [6].

Previous studies suggested that most adults have experienced smoking and drinking alcohol (Gateway drinking) for the first time in their early adolescence [7-9]. The first experiences can lead to consumption of heavier drugs later in one's life. Longitudinal studies suggest that those adolescents who experienced smoking or even smoked only a few cigarettes in their early adolescent age, were three times more likely to become heavy smokers at the end of high school [9]. Similarly, consumption of drugs in early years of a person's life may lead to consumption of heavier drugs. According to the hypothesis on gateway drug use in adolescents [10], teenagers who smoke or drink alcohol are more likely to smoke marijuana and those who smoke marijuana are more likely to consume hallucinatory drugs, stimulants, opiates, etc. Furthermore, empirical evidence suggested that early drug abuse is associated with various negative consequences such as violence and law-breaking behavior in late adolescence and early youth, poor physical health and mental health problems [11, 12].

Over the past thirty years there were a lot of directed efforts to develop effective approaches to prevention of drug abuse at schools. The approaches have mostly targeted high school students and used classroom interventions. School is an appropriate place to run and test drug intervention programs due to the fact that it provides easy access to a large number of young people who begin experiencing tobacco, alcohol, marijuana and other drugs in this age.

One of these approaches is teaching resistance skills in which practical skills are instructed to people. They can use these skills

Access this article online	
Website: www.japer.in	**E-ISSN:** 2249-3379

How to cite this article: Robab Rahmati, Mahmoud Meidani, Shahin Abdolmaleki . The effect of preventive psycho-social program on self-control skills and social problem solving among Iranian students . J Adv Pharm Edu Res 2018;8(S2):188-192.
Source of Support: Nil, Conflict of Interest: None declared.

in social situations which encourage them to use drugs, and to be more resistant against invitation of friends. The common methods of training social resistance skills are communicating the ways of recognizing risky situations, increasing the awareness of possible encouragements, and training the skills of rejecting [13].

The efficiency improvement approaches drew the attention of many scholars in the past three decades. The theory of efficiency improvement approaches intended to prevent the consumption is based on Bandura's social learning theory (1977) [14] and Jessore's theory of problematic behavior (1977). According to this approach, drug abuse is learnt and presented as a social behavior which itself is the result of the interaction between individual (intrapersonal) and social (interpersonal) factors. The drug abuse behavior is adopted by modeling, imitation and the reinforcement of knowledge. It is influenced by certain recognitions, attitudes and beliefs which support the attitude of teenagers toward drug use. It is believed that these factors combined with poor personal and social skills will increase adolescent vulnerability to social influences which are related to drug abuse. The main characteristic of this approach is emphasis on training self-control and social skills (such as life skills training).

Life skill training (LST) is an example of efforts for increasing the performance of a person by a combination of proved methods of training behavioral-cognitive skills. These skills include decision making and problem solving, cognitive skills, skills necessary for increasing self-control, increasing courageousness, compatible and confirming approaches for managing the stress and anxiety, courageousness skills, and general social skills [15].

In the study, it is endeavored to implement psycho-social empowerment prevention program so as to improve students' social-problem solving and self-control skills. Consequently, the hypotheses are as follows:

H.1- training the preventive program will increase the skill of students in solving social problems.

H.2- training the preventive program will increase the self control skill in students.

Methodology

The present study was conducted based on a quasi-experimental method in which two groups (i.e. control and test groups) were evaluated twice during the study (i.e. before and after training). The participants included 380 students (190 females and 190 males) at the age range of 14 to 16 years in Malard (Iran) who were trained during 2014-2015. These students were at the risk of using drugs because they were chosen from a region with low social and economic condition in the society which was due to emigration and prevalence of using drugs and committing crimes. In this region, many families use drugs, drugs are found easily, and many students have the experience of using drugs at lower ages.

This training course was conducted by specialist consultants (trained consultants) and police officers. We used the police officers besides consultants because they were more familiar with drugs, they showed real drugs to students, and presence of these officers for training and introducing drugs and explaining the associated laws for punishing drug use were important factors in prohibition from taking drugs and reinforcement of the law.

This program was conducted for students at the age range of 14-16 years. The reason of choosing this group was that the first year of high school is right after junior school and high school is the time when the teenagers feel that they are grown up. This period in their life is accompanied with certain characteristics such as social growth and being free of family control, the tendency to be accepted in groups, spending the leisure time with their friends, etc., all of which expose them to certain risks.

For conducting this program, the approval for stated justification behind conducting the program was received from the associated educational organization. Then, out of all high schools in the city, 4 schools were chosen randomly, and among these 4 schools 8 classrooms were chosen to be included in the sample. The test group included 4 classes with 190 students, and the control group was made up of 190 students. The psycho-social empowerment program was offered to the test group, and the control group received its typical educational programs. At the end of the course, the two groups were compared with each other.

Psycho-social Empowerment Program

According to the empowerment approach, taking drugs is a learnt social behavior which itself is the result of the interaction between personal and social factors. In regard to this approach, teenagers have weak personal and social skills to resist the contributive factors to using drugs. So, they are vulnerable, and tend to use drugs as a substitute for compatible confronting approaches [13, 15]. Therefore, the empowerment approach emphasizes the prevention of drug abuse, and educating general individual and social skill beside of resistance skills.

This training program is designed based on risk factors and protective factors urging and prohibiting drug abuse by teenagers. The main aim of this study is to realize a change in three fields of knowledge, attitude and behavior of students. The psycho-social empowerment program is an education package which is composed of certain parts including the guidance books for training the teacher (preventing the drug abuse and training life skills) and teachers' workbook [16].

This program included 8 topics (i.e. health value, healthy decision making, risk taking and using drugs, confronting stress and negative excitement, effective communication, healthy communications among people, the insistence of friends, and the skill of refusing and self-confidence) which were trained in 11 sessions. Training the topics was conducted by an interaction method and active training techniques such as brainstorm, group discussion, group activity, raising question, role playing,

and practicing certain behaviors. The means for conducting the present study were:

Self-control Questionnaire

The short form of the questionnaire contains 13 statements and a final score is obtained. This test acts as a self-reporting instrument and it is scored based on Likert scale. One of the divisions for the scale of self-control was a short form containing two sub-scales of inhibitory self-control and initial self-control. Tangney, Baumeister & Boone (2004) discussed the differences between these two subscales and examined the internal consistency of the questionnaire by detailing the alpha of both sub-scales [17]. The results indicated good internal consistency. The values of Cronbach's alpha for inhibitory self-control and for primary self-control were 0.86 and 0.68 respectively.

Social Problem Solving Inventory (SPSI)

The revised short-form questionnaire of social problem solving inventory (SPI-R: D, ZURILA) is a self-reporting scale for measuring social problem-solving skills. The scale examined and measured main factors of theoretical model of social problem solving. The scale has five subscales (positive and negative orientation, logical, impulsive and avoidance style) and includes 25 questions which are scored based on a five-point Likert scale. Alpha coefficient for the five subscales equals to 850 and reliability of retest is calculated as R=0.88 [18].

The results were analyzed by covariance analysis method and using spss software.

Results

The total number of students participating in the study was 380 (190 males and 190 females). Covariance analysis was used for comparing the test and control groups in regard to self-control and through controlling the effect of primary differences between the two groups in terms of this variable.

As shown in Table 1, the average scores of self-control at post-test in test and control groups were 40.01 and 34.65 respectively. Leven's tests indicate that there is no significant difference between variance of groups (p = 0.82). Covariance analysis indicates the significant effect of preventive intervention on self-control scores after controlling initial differences between the two groups in terms of the scores of self-control at pre-test (f = 271.426, p <0.01). Therefore, the first hypothesis is supported and the null hypothesis is denied. Furthermore, Ƞ2 was 0.12. This index indicated that intervention can explain 12% of the variance in self-control scores at the post-test. The results are shown in Table 1.

Table 1. Covariance Analysis of Effect of Preventive Interference on Self-Control

Index	Mean		SD		Leven's test	
Variable	experiment	control	experiment	control	experiment	control
Self-control at post-test	40.02	34.65	10.63	11.072	0.82	378.1
Source of variance	sum of squares	df	average of squares	F	p	η^2
Self-control at pre-test	4351933	1	4351933	2513028	0.01	0.87
Prevention intervention	4700425	1	4700425	271426	0.01	0.12
Error	6528693	377	17317			
modified Total	52780555	379				

The analysis of covariance was used to compare the test and control groups in regard to social problem solving after controlling the test scores at pre-test in terms of the variable of social problem solving skills. As shown in Table 2, the average scores of self-control at post-test in test and control groups were 82.61 and 75.6, respectively, and Leven's test showed that the variance of test scores of the two groups had no significant difference in terms of the intended variable (p = 0.08).

The covariance analysis indicated the significant effect of the preventive intervention on social problem solving scores after controlling the pre-test scores between the two groups for social problem solving skill (f = 10.867, p <0.01). In other words, preventive intervention was able to create a significant change in the social problem solving scores at the post-test. The second hypothesis of this study is supported and the null hypothesis is denied. In addition, Table 2 showed that independent variable can explain 2.8% of the variance of the post-test scores of social problem solving.

Table 2. Covariance Analysis of Impact of Preventive Intervention on Social Problem Solving

Index	Mean		SD		Leven's test	
Variable	experiment	control	experiment	control	p	df
Social problem solving at post-test	8261	756	19454	21.602	0.86	378.1
Source of variance	sum of squares	df	The average of squares	F	p	η^2
Social problem solving at pre-test	250645	1	250645	0.593	0.442	0.002
Prevention intervention	4596933	1	4596933	10867	0.01	0.028
Error	159476134	377	423014			
modified Total	164395789	379				

Discussion

This present study intended to compare the scores of groups at post-tests by controlling the primary differences between test and control groups in regard to the variables of self-control at pre-test so as to measure the effect of educational interference on self-control variables. The covariance analysis about the first hypothesis showed that preventive intervention has been able to

significantly increase the scores of self-control ($f = 271.426$, $p < 0.01$).

These results agree with the findings of Khalili et al (2010), and Sohrabi et al (2008) who suggested that life skills training may change the attitude of students towards drugs. However, the results did not match the findings of Kim et al. (1993) who suggested that life skills training does not have an effect on the test group.

In analyzing the second hypothesis, the covariance analysis was used to evaluate the effect of preventive intervention on social problem solving by students. The covariance analysis examined the changes in post-test scores by controlling the pre-test scores of social problem solving skills among students. The results indicated that independent variable can significantly increase social problem solving scores ($f = 10.867$, $p < 0.01$).

Our findings showed that training the psycho-social empowerment program increases self-control and social problem solving skills. Since the results of various studies [19, 20] show that impulsive behaviors such drinking alcohol, taking drugs and smoking cigarette are associated with low self-control, it is recommended to use this program at schools as a preventive program against using drugs. In this educating program, it is tried to increase the self-control and confronting skills in students so as to prevent drug use. Moreover, since this research is a sectional study it is better to perform follow up studies in this group and investigate the effect of this program on other criteria as well.

Conclusion

According to the results of our study, the psycho-social program can increase the self-control and social problem solving skills in students. Since these skills are found effective in various researches on preventing the tendency of teenagers to use drugs, it is necessary to perform psycho-social empowerment programs at schools especially in regions with more exposure to these risk.

Acknowledgement

This paper is a part of a PhD thesis by the first author entitled The effect of educating life skills on self -control skill, social problem solving and using drugs by teenagers.

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