

Designing a Training Package "Increasing Awareness of Adolescents to Change Their Attitude toward Substance Abuse"

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Abstract

Objectives: the purpose of this study was to design a training package "increasing awareness of adolescents to change their attitude toward substance abuse. Method: the research project was quasi-experimental with pre-test and post-test with control group. The population of the study consisted of 390 students from Tehran. The final sample was 60 participants who had the entry criteria to the study. In the next step, 30 subjects were randomly assigned to the experimental group and 30 subjects to the control group. All participates before and after the implementation of the educational package, completed the questionnaire of 25 questions about addiction attitudes that were developed and validated by the researchers. For the experimental group, 24 sessions of group training were held twice a week for 90 minutes. Results: findings show that there is a significant difference between the groups in the individual, environmental and social components of attitude toward addiction. Conclusion: group educational package of increasing adolescents' awareness has been effective in changing their attitude regarding substance abuse among adolescents.

Keywords: *Educational package, Increasing awareness, attitude change, substance abuse*

1. Introduction

Today, we are witnessing rapid and widespread changes in various aspects of human life. At one end of the continuum of these vast changes, there are positive achievements for the well-being and comfort of societies and at the other end there are devastating consequences, such as physical and psychological illnesses. Among the destructive psychological consequences we can mention addiction, which has spread to all parts of the world today. Numerous studies around the world indicate that the use of Psychotropic substances in streets, schools, colleges, universities, prisons, and society in general is on the rise (Kasule, 2011). Substance abuse disorder is the second most common psychiatric disorder after major depressive disorder, which is very important in terms of prevalence (Sadok and Sadok, 2015; translated by Farzin Rezaei, 2015).

The United Nations Office on Drugs and Crime (UNODC) considers the issue of narcotics, including production, transmission, distribution and consumption, along with three other global issues: the production and accumulation of weapons of mass destruction, environmental pollution, poverty and class distinction which threatens and challenges human life in the social, economic, cultural and political dimensions. In 1979, more than 60 percent of 12th graders in the United States tried marijuana at least once in their lives, according to the National Institute on Drug Abuse

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(NIDA). The prevalence of marijuana abuse has risen from the twelfth grade up to 50 percent from 1993 to 1997.

In a study of adolescents' positive attitudes toward addiction as a predictor of addiction, Isaac et al. (2014) concluded that male gender and neurotic personality play a significant positive role in predicting positive attitudes toward substance abuse among students. They also reported that agreeableness, conscientiousness, openness, and socioeconomic status played an important role in predicting substance abuse predisposition, while students' extraversion did not play a significant role in predicting a positive attitude toward substance abuse. In another article, Narimani & Sadeghieh (2012) concluded that family related factors such as conflict with family members and neighbors and the lack of family and community support for adolescents can lead to a positive attitude toward adolescents' addiction. Moreover, Personality factors such as depression and severe anxiety, lack of self-control, and self-esteem can also have an effect on adolescents' positive attitudes toward addiction.

Mazloomi Mahmood Abad et al. (2017) concluded in their study that smoking and education level of fathers, family size, history of use of synthetic drugs by parents or friends and their occupations can predict adolescents' positive attitude towards addiction. In a study in Iran, Pasha Meysamie et al. (2006) concluded that the attitudes of addicts regarding the importance of addiction as an individual problem were significantly different from the attitudes of non-addicts, and both groups have considered unemployed, lack of recreational facilities and addiction as three main problems of their residential area. Unemployment and a lack of recreational facilities are expected to affect adolescents' positive attitudes toward addiction.

Rather et al. (2013) reported in an article that among the main factors of personality traits, social and economic factors as well as demographic factors have a significant role in adolescents' positive attitude towards addiction and can predict the tendency to drug abuse. Be among them. In another study, Baral et al. (2015) concluded that according to residents, there are four dimensions to adolescents' attitudes toward addiction: 1. Judgment on the medical treatment of addiction and harm reduction, 2. Attitudes toward other clients, 3. Attitudes about the importance given to training and 4. Attitudes about the evaluation of training received by clients.

The results of the Hessin et al. (2015) epidemiological study between 2001 and 2012 show that the number of cannabis users among adolescents has more than doubled compared to before this date. According to the 2002 report on drug use and mental health management, of the 206 million Americans who used marijuana for the first time in 2002, about two-thirds were under the age of 18 (Tadurovich, Prionicic and Marjanovic, 2010), and among Australians, Between 1993 and 2007, the highest age for drug use was reported to be between 14 and 19 (Roxberg et al., 2010). These findings are a cogent indication that in most cases substance use begins at the age of adolescence (Agraval and Linsky, 2009). Statistics also show a growing prevalence of psychological trauma in this age group. The World Health Organization (WHO) has announced that by 2020, psychological trauma will be the second leading cause of all illnesses in the world, and it is expected to increase by as much as 20 percent among adolescents. The most common of these issues in adolescence is substance abuse (Sydkova and Antonovua, 2013). Studies of age-related changes, along with demographic and environmental findings, well illustrate the potential for adolescents to use a variety of substances (Pim Coopers, 2003). Some of these characteristics include: stress and dissatisfaction with quality of life (Vaz, Leon and Laflam, 2006), low perception of risk and impulsivity (Administration of Mental Health and Drug Use, 2015), weak self-concept (Schultz, 1980), Mismatched adaptive skills (Di Urara, Fiman, 1988), Neuroticism and negative emotionality (Dishung, Tucker, Okif, Malins-Schwitt, and Wingit, 2015).

Consumption of various substances is directly related to mental health problems. Continued use of marijuana can cause problems with concentration and thinking (Tadurovich, Prionicic and Marjanovic, 2010; Estoup, Moise-Campbell, Varma & Stewart, 2016). Other studies have shown that long-term use of psychotropic substances, in addition to cognitive, perceptual and motor impairments, can lead to other mental disorders such as anxiety, panic attacks, depression, cognitive and perceptual problems, and in some acute cases It also leads to suicide (Weitzman, 2004; Bola, Brown, Elder, Tat and Cadet, 2002). Today, the number of adolescents admitted to hospitals has increased due to the use of new psychedelics and the consequences of their use (Chadi, Begli and Hadland, 2018). It is important for teenagers to be aware that their brains are

growing, developing, and forming, and that healthy growth can be the basis for developing more skills to manage a variety of issues in their future life (Meier, Caspi, Ambler, Harrington, Houts & Keefe, 2012). Deactivating these changes in the brain is not an easy task and can take a long time. Therefore, early intervention that is before brain changes and coercive tendency to use is vitally important.

Due to the persistent negative changes in the use of psychedelics on the brain on the one hand (Mir et al., 2012) and early onset of use as a predictor of longer-term use, greater severity of addiction and more persistent injuries (Agraval and Linsky, 2009). DiForti, Marconi, Kara, 2015, and the consequent increase in resistance and therapeutic fractures (Stephen, Babur, Kaden, and Miller, 2002), necessity of preventive interventions is well perceived. Statistics show that with the increase in these problems in adolescents, referrals to counseling and treatment centers for services have also increased (Fortney, Koran, Hunt, Cheney, Walstein, and Isenberg, 2016). The basis for the formation of preventive programs is to pay attention to theoretical models that justify the reasons for drug use in adolescents (Kodjo and Klein, 2002). One of these theoretical models that was implemented in Iran was the Theory of Planned Behavior to Predict Drug Abuse among Adolescents (TPBPDA), the results of which were satisfactory in the short term (Bashirian, Heidarnia, Allah Verdipoor and Hajizadeh, , 2013). Also, another preventive program was carried out by Asgari, Abdul Parvardagari and Zairi Esfahani (2016) with the aim of increasing life skills among adolescents, which has been a good success. Khadivi Dehgah (2016) has also had satisfactory results by implementing the self-control-self-regulation program for adolescents.

Another point to note is that less attention seems to have been paid to the development of individual-centered preventive education programs aimed at making adolescents safer to substance abuse. In particular, preventive programs that plan education in accordance with local culture and conditions. Therefore, this study was conducted with the aim of raising awareness among adolescents in the prevention of addiction.

2. Method

2.1. Research Plan and Participants

The present study is an applied study in terms of purpose and in terms of collecting information it is semi-experimental type with pre-test and post-test design with control group. The present study population included all adolescents of secondary schools in the east of Tehran province and between the ages of 15 and 18 years. After presenting the researcher's explanations about the objectives of the study, only 61 people were willing to participate in the project. One person then left the project and the remaining group was 60 people, all of whom were considered as the sample group in this study. Of these, 30 were randomly assigned to the experimental group and the next 30 were selected as the control group.

3. Tool

3.1. 25-Questions Questionnaire of Addiction Attitude

This questionnaire was designed and developed by researchers and a team of 10 experienced addiction therapists with three individual, environmental and social factors. The content validity of this questionnaire was confirmed by 12 experts in the field of addiction and questionnaire design. The Cronbach's alpha of the whole questionnaire was 0.89 in a pilot with 390 people. The alpha value for the individual section, the social section and the environmental section was 0.817, 0.795, and 0.787, respectively. The total retest validity coefficient was 0.673 and the coefficients for sub-components were 0.723, 0.711 and 0.693, respectively. In the confirmatory factor analysis of the questionnaire, the indicators of fitting for the three-factor structure of the questions were properly confirmed (Rmse = 0.052).

3.2. Local package of group training "Awareness raising in prevention of adolescent addiction"

This package was written by the author in charge of this study over a period of 3 years and has tried to take the needs of Iranian society into account. In this package, the author has well considered the differences between local values, Iranian-Islamic culture, micro-factors and cultural contradictions of substance abuse between Iranian users and users in other countries. After finalizing the package and completing the content of the meetings, the author provided this package to 5 experienced and well-known therapists in the field of prevention and treatment of addiction to know their final opinion about the package and eliminate possible problems. The overall consensus of them was that the plan had a useful yet detailed content that was worth implementing in a large scale. This package is in its testing phase and in case of success, it can be introduced in form of an effective preventive package. The training session process consisted of 24 90-minute sessions and twice a week. The content of these meetings is reported in Table 1.

Table 1. Content of Group Awareness Sessions to Prevent Substance Abuse in Adolescents

sessions	activities
Session 1	Definition of addiction, substance dependence and substance abuse, the nature of addiction, the characteristics of addiction stages.
Session 2	Types of substance, the most common substance and their consumption reasons, how to use them and their unit of consumption.
Session 3	Short-term and long-term effects of drugs, especially the most common ones, along with images
Session 4	Continuation of short-term and long-term effects and side effects of materials with images
Session 5	Age of addiction and the reasons for this / Starting a discussion about the risk factors involved
Session 6	Continuation of risk factors for adolescents
Session 7	Why is drug use considered a social problem?
Session 8	Family and addiction, family status, systems governing the family, and basic concepts
Session 9	How the family plays a role in adolescents' tendency to substance abuse
Session 10	Family events, family interactions, coping errors with adolescent behavior
Session 11	Parenting practices and coping with family stressors
Session 12	Adolescence and psychological, mood, personality and behavioral characteristics that make potential of drug abuse along with examples
Session 13	Continuation of the mood, personality and behavioral characteristics of adolescents with examples
Session 14	The process of emotional change in adolescence and the manifestations of these changes
Session 15	Review of previous sessions, summarize the content of the sessions and group participation

Session 16	Question and answer session, brainstorming, participants' summaries and individual and group feedback
Session 17	Protective and immunogenic agents against addiction
Session 18	The concept of prevention and its basic principles, as well as, their application in the field of chronic diseases and addiction
Session 19	A variety of prevention programs and methods and their success with an emphasis on their principles and goals
Session 20	Evidence-based strategies in drug prevention and suggested strategies
Session 21	Creating peer pressure resistance skills
Session 22	Training short-term and long-term targeting skills
Session 23	Changing normative beliefs among young people and providing accurate and true information about them
Session 24	Review of previous sessions, summarize the content of the sessions and group participation

4. Procedure

This educational package has been implemented in the form of a national plan and it was supported by the relevant governmental organizations on a trial basis for 10 secondary high schools in the east of Tehran province which had about 390 students. After obtaining permission from the management of the above mentioned school, a meeting was held to explain to the participants about the objectives of the project and the implementation process. After the researcher's explanation, only 61 people were willing to participate in the project. One person then left the project and the remaining group was 60 people, all of whom were considered as the sample group in this study. Of these, 30 participants were randomly assigned to the experimental group and the next 30 were selected as the control group.

All participants in the project completed a 25-item questionnaire on addiction attitude, which was developed by the researchers of this study before and after implementation of the training package. For the experimental group, 24 group training sessions were held twice a week for 90 minutes and no specific intervention was performed for the control group. In this study, researchers used PowerPoint software, slides, questions and answers, and group participation to run the training package. The mean age of the sample group was 44.72 years with a standard deviation of 3.93. Regarding their educational level, 31% were not high school graduates, 53% were high school graduates, 13% were BA/BS holders, and 3% were MA/MS holders and higher degrees. In order to analyze the collected data, a single and multivariate analysis of covariance analysis was used.

5. Results

One-variable covariance analysis was used to investigate the effectiveness of awareness-raising group training package on adolescent substance abuse prevention. The results of the pre-test and post-test regression slope homogeneity test in the experimental and control groups showed that the regression slope was established for the total scores of addiction attitude ($p < 0.167$, $F_{1.57} = 1.87$). The results of Levine's test for homogeneity of variance of dependent variables in groups showed that the variance of executive function ($p < 0.348$, $F_{1.58} = 0.912$) was equal in groups. Table 2 shows the results of single-variable covariance analysis to examine the differences between the experimental and control groups in pretest and post-test regarding their attitudes toward addiction.

Table 2. Results of Single Variable Covariance Analysis Related Difference between the Experimental and Control Groups in the Total Score of Attitude to Addiction.

Effect size	sig	F	Mean squares	Degree of freedom	Sum square	منابع تغییر
0.25	0.232	1.456	133.20	1	133.20	pretest
0.692	.0.000	128.250	11729.82	1	11729.82	group
			91.46	57	5213.23	error
				59	17190.58	total

According to Table 2, the F-statistic is significant for addiction attitude scores (128.25) at the level of 0.0001. These findings suggest that there is a significant difference between groups regarding their attitudes toward addiction. F-Statistic for attitudes toward addiction in pre-test is (1.456), which is not significant at the level of 0.692. This finding suggests that the pre-test did not have a significant effect on post-test scores.

Table 3. Weighted Mean and Differences between the Experimental and Control Groups in the Total Scores of Addiction Attitudes

sig	Standard error	Mean difference	SD	mean	group	Dependent variable
0.000	2.471	27.985*	1.747	91.07	experiment	addiction attitudes
			1.747	63.09	control	

The results of analysis of covariance showed that the Trimmed Mean of the experimental group in attitude towards addiction (91.07) and the mean of the control group (63.09) are significant according to the F-statistic at the level of 0.001. Based on these findings, it can be said that the awareness-raising training package has been significantly effective in preventing adolescents from substance abuse.

Multivariate covariance was used to investigate the effectiveness of awareness-raising group training package regarding adolescent addiction prevention on individual, environmental and social factors. The results of the pre-test and post-test regression slope homogeneity test in the experimental and control groups showed that the regression slope was established for individual, environmental and social factors. The results of Levine test for homogeneity of variance of dependent variables in groups showed that the variance of individual factor ($p < 0.348$, $p = 0.51912$), environmental factor ($p < 0.242$, $F_1 = 1.217$), 58) and the social factor ($p < 0.252$, $F_{1.58} = 1.370$) is equal in groups. The results of the box test to check the equivalence of the covariance matrix of the dependent variables of the experimental and control groups also showed that the matrix was equal in the two groups ($p < 0.284$, $F = 1.259$, $BOX M = 4.29$). The results of the Chi-2 Bartlett test for the significance of the relationship between the three components of the attitude towards addiction showed that the relationship between these components was significant ($p < 0.001$, $d = 2 = 2$, $X^2 = 21.47$).

Table 4. Results of Multivariate Analysis of Covariance Difference between Experimental and Control Groups for the Scores of Different Factors of Adolescents' Attitudes Toward Addiction

η^2	sig	df2	df1	value F	Wilks Lambda	variable
0.111	0.099	53	3	2.201	0.889	Pretest individual factors
0.111	0.099	53	3	2.201	0.889	Pretest environmental factors
0.140	0.045	53	3	2.879	0.860	Pretest social factors
0.666	0.000	53	3	35.257	0.334	group

After examining the multivariate analysis of covariance assumptions, the test results showed that there was a significant difference between the two groups in the scores of individual, social and environmental factors ($p < 0.001$, $105 = 1.333 = 1.354$). $0 = \text{Wilk's Lambda}$). Table 5 shows the results of the weighted mean scores and the analysis of univariate covariance to indicate which variables of addiction attitude factors differ in control and experimental groups.

Table 5: Weighted Mean and Differences between Experimental and Control Groups in the Scores of Individual, Environmental and Social Factors of Attitude to Addiction

Effect size	sig	Value F	sd	mean	group	Dependent variable
52.72	0.478	0.001	50.451	1.31	52.72	individual factors experiment control
				1.31	38.77	
19.89	0.396	0.0001	36.119	0.56	19.89	environmental factors ^l experiment control
				0.56	14.87	
20.58	0.430	0.0001	41.486	0.93	20.58	experiment social factors control
				0.93	11.61	

According to Table 5, the F–statistic is significant for the variable of individual factors (50.450) at the level of 0.001, in the environmental factor, the F-statistic (36.119) is significant at the level of 0.0001 and for the environmental factor F -statistic (41/486) is significant at the level of 0.0001. These findings suggest that there is also a significant difference among components of attitudes toward addiction. As can be seen in the table, the scores are such that the experimental group has more means than the control group. These differences indicate that the awareness-raising training package has had a significant effect on the components of attitudes toward addiction (i.e. individual, environmental and social factors) in order to prevent substance abuse in adolescents.

Discussion

Addiction, through a variety of mechanisms, leads people to be more inefficient and unhealthy. To prevent addiction, one must go beyond superficial trainings and mere skills, and pay due attention to attitudes and complex conditions of people's lives. Nowadays, awareness-raising preventive programs have become more important, but the question that arises here is that if preventive programs have been effective and have been able to protect adolescents against addiction, then why substance abuse has experienced an upward trend in Iranian society, as well as other societies. It seems that there is a gap in the content of such preventive programs that may be filled by considering the various dimensions of the disease and not just the person exposed to. Having a comprehensive view of addiction can lead to more comprehensive and helpful preventive programs.

The aim of the present study was to test the group training awareness rising of adolescents in changing their attitudes towards substance abuse. The results of this study show that the educational package has a positive effect on all three individual, social and environmental components of attitude towards addiction and has been able to increase the level of awareness regarding addiction and tendency to it.

After all, the effectiveness of above mentioned preventive package is consistent with the results of preventive studies in Heidarnia, Allah Verdipoor and Hajizadeh (2013); Asgari, Abdul Parvardgari and Zayeri Esfahani (2016); Khadivi Dehgah (2016). Explaining the results of this study, it can be said that it seems that focused attention to a micro factor involved in addiction and a comprehensive look at the various dimensions of that micro factor, in the form of a preventive program, can achieve better results than preventive packages that consider several factors or micro factors simultaneously.

Acknowledgments

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