

Investigating the Role of Attitude towards Substance use in the Relationship between Students' Self-Efficacy and Preparedness for Addiction

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Abstract

Introduction: Drug use in adolescents and its implications are an important public health issue that can lead to long-term costs. Accordingly, the present study aims to investigate the role of attitude towards substance in the relationship between students' self-efficacy and preparedness for addiction.

Method: The present descriptive-correlational study was performed on 228 high school students (116 girls, 112 boys) in Lorestan province, Iran who were selected by multi-stage cluster sampling. Data collection tools included Rahmati Attitude towards Substance Questionnaire (ASQ), Muris Self-efficacy Questionnaire-Children (SEQ-C), and Zargar Iranian Addiction Potential Scale (IAPS). Data were analyzed using Pearson correlation and multiple regression analysis in SPSS software version 22.

Results: The results show that there are significant correlations between attitude towards substance, self-efficacy and addiction preparedness ($P < 0.05$). Also, the results of hierarchical regression analysis indicate that attitude towards substance can moderate the relationship between self-efficacy and addiction preparedness ($P < 0.05$).

Conclusion: The results of this study indicate that the attitude towards substance plays a moderating role in the relationship between self-efficacy and addiction preparedness. Therefore, changing the attitude of individuals to substance can reduce the tendency of adolescents to consume drugs.

Keywords: Addiction Preparedness, Attitude towards Substance, Self-efficacy, Adolescents

Introduction

In recent years, the prevalence of drug use, especially new substances, such as ecstasy, has increased among Iranian people [1-2]. The use of substances in adolescents and its implications are an important public health issue which have important long-term effects [3-4]. Adolescence, as a transitional period, is associated with psychological and physical changes, greater autonomy, and risk [5]. In some studies, drug use is associated with an increase in violent behavior and harmful effects of substance use [6]. Early use of cigarettes and alcohol in teens strongly predicts marijuana consumption [7]. Also, drug use in adolescence may increase juvenile delinquency [8-9]. The risk and protective factors model is one of the most important models of multifactorial etiology that has been very useful in explaining and preventing substance use in recent years [10]. According to this view, the overall outcome of the protective factors against the risk factors is the consumption of substance. The result is a more appropriate and comprehensive explanation of the etiology of drug use [11].

Different research results show that self-efficacy can enable a person to adopt health promotion behaviors and leave off harmful behaviors for health [12-15]. Self-efficacy is a cognitive-social theory constructed by Bandura. It is actually a person's belief in his/her ability to successfully complete a job or adapt to a particular situation [16-17].

Some research evidence suggests that interventions that aim at increasing self-efficacy can be effective in changing the behavior of substance use [12]. In other words, drug intake decreases by increasing self-efficacy [17-18]. The results of research on 1861 adolescents in 11 high schools indicated a significant relationship between perceived self-efficacy and substance use in adolescents [19]. Accordingly, drug use is significantly lower in adolescents who report higher self-efficacy. Another research evaluated adolescents' self-efficacy and attitudes and reported that low self-efficacy has a meaningful relationship with positive attitude towards substance [20].

Research evidence [21] also shows that there is a relationship between specific attitudes and beliefs about drug use and the onset of drug use. People who have a positive attitude towards drug use are more likely to test substances. Attitude is a relatively constant method of thinking, feeling and behavior towards individuals, groups and social issues, or somewhat wider, towards any incident in the individual's environment [22]. Accordingly, the attitude towards substances has three elements of cognition, emotion, and preparedness for action that play an important role in starting drug use [23]. An individual's positive attitude towards drug use is likely to lead to drug use at an earlier age [24]. This risk factor is not only a research predictor in adolescents, but is also important in successful preventive interventions [25-26]. Understanding the role of positive attitude towards drug use and its implications is one of the first and most important measures in drug prevention programs [27]. In other words, the desire to consume and continue drug use can be avoided by creating negative attitudes towards substances [28]. Another study has shown that people who have a positive attitude towards substances are at increased risk for drug use as positive attitudes and beliefs towards drugs facilitate the onset of drug consumption [29]. Another study reviewed 1090 teenage students and found that a positive attitude towards drug use in adolescents can lead to a greater tendency towards drug use [21].

Reduced age range of drug use has endangered many young people and adolescents and has caused a widespread concern in community levels [30]. Drug abuse is increasing among Iranian teenagers. As a result, this issue is one of the most common disorders of adolescence [31]. Therefore, avoiding confrontation and underestimating the use of substances will have adverse effects on any society due to harmful consequences, such as destruction of social and economic resources, the threat of social security and the occurrence of various types of deviations. In addition to uncontrolled consumption, consumption of substances and its accompaniment to other psychological disorders have cost a great deal on the health system of the communities and

has also led to increased mortality rates [30]. Hence, one of the important fields of research regarding drug use is the identification of protective and risk factors affecting the tendency to use drugs in adolescents. Although research evidence has shown the general link between self-efficacy and attitude toward substance use, there is no study in the literature investigating the mediating role of attitude towards substance in the relationship between self-efficacy and addiction preparedness. According to what was said, the purpose of this study was to investigate the role of attitude towards substance use in the relationship between self-efficacy and addiction preparedness.

Method

The present descriptive-correlational study was performed on 228 high school students (116 girls, 112 boys) in Lorestan province in 2018. Based on multistage cluster sampling, one county (Khorramabad) was selected from among Lorestan province counties and two high schools were selected from among Khorramabad high schools. Also, four classes were randomly selected from each high school. The inclusion criteria were being high school students and willingness to participate in the research. The exclusion criteria were the incomplete completion of the questionnaire and lack of interest in the research. The following three questionnaires were used to collect information.

Attitude towards Substance Questionnaire (ASQ):

This questionnaire was developed by Rahmati [32]. Respondents express their views on 34 questions of three options. In this questionnaire, the minimum score is zero and the maximum score is 68. Reliability of the questionnaire was 0.80 using test-retest method with a one-week interval and it was 0.803 using the internal consistency method (Cronbach's alpha). The results of factor analysis showed that the questionnaire was saturated with four factors of general attitudes, beliefs (cognitive), excitements (emotional) and readiness for action (behavioral) [32]. Sohrabi and Khalili [32] calculated the reliability coefficient of this questionnaire by two methods of test-retest and Cronbach's alpha, turning out to be 0.71 and 0.85, respectively. In order to obtain face validity of the questionnaire, it was sent to five faculty members by Sohrabi and Khalili [32]. Finally, its face validity and content validity were confirmed. In the present study, alpha coefficients of the four factors of general attitude, beliefs, excitements and readiness for action were 0.78, 0.72, 0.86 and 0.69, respectively. Also, the total alpha coefficient of the questionnaire was 0.88.

Iranian Addiction Potential Scale (IAPS):

This scale was developed by Zargar [33], consisting

of two factors with 35 questions plus five polygraph questions. In the first factor (active preparation), most questions are related to antisocial behaviors, desire to use drugs, and excitement. In the second factor (passive preparation), most questions are about the lack of self-expression. Scoring each question is based on a 3-point Likert scale from zero (totally disagree) to three (totally agree). Construct validity and criterion validity of the questionnaire have been evaluated. In criterion validity, the scale has well distinguished two groups of addicts and non-addicts. The construct validity of the scale was calculated by correlating it with SCL-25 scale, turning out to be 0.45, which was significant at $P < 0.0001$. Also, the reliability of the scale has been calculated by Cronbach's alpha, turning out to be 0.91 [33]. In the present study, Cronbach's alpha of the whole scale, active preparation, and passive preparation were 0.85, 0.82 and 0.73, respectively.

Self-efficacy Questionnaire-Children (SEQ-C):

This questionnaire was developed by Muris [34] to assess the self-efficacy of children and adolescents. This 23-item questionnaire consists of three subtests of social self-efficacy, academic self-efficacy, and emotional self-efficacy. Each question is evaluated on the basis of a 5-point Likert scale from zero (not at all) to four (very high). The results of the research by Muris [34] have shown the three-factor structure of three social, educational and emotional areas using factor analysis. Also, the total reliability of the self-efficacy questionnaire was 0.77, social self-efficacy was 0.78, academic self-efficacy was 0.87, and emotional self-efficacy was 0.80 respectively. In this study, the internal consistency of this questionnaire by Cronbach's alpha for social, educational and emotional factors were 0.71, 0.85 and 0.78, respectively. The Cronbach's alpha coefficient for the total questionnaire was 0.87.

In this research, Pearson correlation and multiple regression analysis were used to test the relationship between attitude towards substance, self-efficacy and addiction preparedness. In the regression analysis, the moderating role of the attitude towards substance in the relationship between self-efficacy and addiction preparation was tested with Baron and Kenny approach [35]. The first condition is that the independent variable should be significantly related to the moderating variable. The second condition is that the independent variable should have a significant effect on the dependent variable in the absence of a moderating variable. The third condition for a moderating relationship is that when an independent variable and a moderator are simultaneously entered on the dependent variable, the effect of the independent variable on the dependent variable should be significantly smaller (partial moderation) or insignificant (full moderation). The SPSS software version 22 was used

for statistical analyses in this research.

Results

Among the total 228 students, 50.88% were girls (116 persons) and 49.12% were boys (112 persons). Based on the age difference of respondents, 51.76% (118 persons) aged 14-15 years, 42.98% (98 persons) aged 16-18 years, and 5.6% (12 persons) did not report their age range. Tables 1 and 2 show the mean, standard deviation and internal correlation between variables.

Table 1. Mean, Standard Deviation of Research Variables

Variables	Mean	SD
Addiction Preparedness	30.1	6.87
Self-efficacy	13.11	3.47
Attitude toward Substance	27.62	6.44

Table 2. Internal Correlation of Research Variables

Variables	1	2	3
Addiction Preparedness	1		
Self-efficacy	-0.53**	1	
Attitude toward Substance	0.43**	-0.27*	1

* $P < 0.05$ / ** $P < 0.01$

Based on the results of Table 2, there is a high correlation between addiction preparedness, self-efficacy and attitude towards substance. Table 3 presents the moderated regression analysis results. The results of Table 3 show that the addiction preparedness and self-efficacy variables were entered in the first step. In the second step, self-efficacy and attitude towards substance were entered, and in the third step, self-efficacy, attitude towards substance, and addiction preparedness were included in the regression equation.

The results of Table 3 in the first step show that the self-efficacy variable is a significant predictor of addiction preparedness ($p < 0.01$). In the second step, self-efficacy is a significant predictor of attitude towards substance ($p < 0.01$). In the third step, with the simultaneous entry of self-efficacy and attitude variables, the effect of self-efficacy on addiction preparedness was somewhat moderated by the attitude towards substance (from $\beta = 0.44$ to $\beta = 0.37$, $p < 0.05$). Investigating the significance of the Sobel test [36] showed that this indirect effect was significant ($Z = 2.5$) ($p < 0.05$).

Discussion

The present study aimed to investigate the role of attitude towards substance in the relationship between self-efficacy with addiction preparedness. As was mentioned earlier, there was a meaningful relationship between self-efficacy, attitude towards substance, and addiction preparedness. Also, the attitude towards substance somewhat moderated the effects of self-efficacy on addiction preparedness.

Table 3. Summary of Moderated Regression Analysis

General and direct effects		B	SE	β	T	sig
1	Predictor: Self-efficacy; Criterion Variable: Addiction Preparedness	-0.37	0.07	-0.45	-4.48	0.001
2	Predictor: Self-efficacy; Criterion Variable: Attitude towards Substance	-0.13	0.06	-0.26	-2.55	0.01
3	Predictor: Self-efficacy and Attitude towards Substance; Criterion Variable: Addiction Preparedness	0.30	0.08	0.38	-2.23	0.04
Sobel test					Z	P
					2.5	0.03

Research evidence suggests that self-efficacy has a negative relationship with attitude towards substance use [20, 37]. Efficacy beliefs and judgments affect performance expectations and individuals' positive or negative knowledge of different subjects [38]. Based on this, the formation of positive or negative attitudes to substance in adolescents is due to their beliefs about self-efficacy and the extent to which they value it [39]. In this regard, a research on 176 male adolescents, aging 15-18 years, showed that adolescents with a lower self-efficacy have a more positive attitude towards substance. In other words, there is a significant negative correlation between self-efficacy and attitude towards substance [37]. Individuals with high self-efficacy properly assess their ability in dealing with issues and carrying out responsibility in comparison to those with lower self-efficacy. This is because of their greater courage and self-esteem, and that they easily ignore positive judgments and attitudes to substance use [40]. In fact, resistance to high-risk behaviors is the consequence of self-efficacy and a sense of self-confidence. On the other hand, adolescents who believe they have poor capabilities may be looking for ways to deal with their perceived disabilities. As cognitive and emotional abilities do not evolve in adolescence and that adults are more affected, they can formulate irrational and risky expectations. One of the high-risk expectations that teenagers are likely to face in dealing with poor self-efficacy is the positive expectations and attitudes to substances. They may have unreasonable expectations and irrational attitudes about the risks and consequences of substance use. Examples of such attitudes are "I will not get addicted with one-time use of the substance, it can have useful properties, the use of substances makes me good in the eyes of my friends, the consumption of substances makes me forget my sorrows and helps me to get away from my problems for a few hours". Accordingly, positive expectations and attitudes towards drugs in adolescents can be influenced by their poor perceived efficacy over important issues in adolescence.

Evidence suggests that attitude towards substance is relevant to drug use [18, 41-43]. In this regard, a descriptive study titled "the relationship between knowledge, attitude and ability to resist against drug abuse among adolescents" on 243 high school students showed that a negative attitude towards drug can predict resistance to drug use in adolescents [42]. In another study on 146 high school students which investigated the

predictive role of attitude towards substance and drug use in adolescents, it was shown that the positive attitude of adolescents towards drugs can greatly predict tendency to use drugs in adolescents [43].

The theory of planned behavior by Ajzen also accepts the value-expectation approach and suggests that particular attitude towards substance is affected by personal consequences (for example, the costs and benefits) that adolescents expect from the use of substances and the emotional value they bring to these consequences. If the expected benefits of substance are more valuable than the expected costs for teenagers, they are more likely to have a positive attitude towards drug use [38]. Also, Ellis [44] believes that it is the attitude of addicted people that leads them to re-use or abandon substance abuse forever. Cognitive bias theory also states that drug use is rooted in the bias in attitudes. In addition, the theory of expectation suggests that substance use is due to individual expectations of the cost and profitability of the substance. For example, the theory of expectation suggests that alcohol consumption is related to individual expectations for the desired effect. Therefore, alcohol consumption is associated with positive expectations and is negatively correlated with negative expectations. Heavy alcohol users report more positive expectations compared to light alcohol consumers. Actually, heavy alcohol consumption is associated with social expectations and physical pleasure, social courage, tension reduction, greater social ability, and increased cognitive and motor function [45].

Regarding the moderating effect of attitude towards substance in the relationship between self-efficacy and addiction preparedness, it is important to note that no previous study was found considering the moderating role of attitude towards substance in the relationship between self-efficacy and addiction preparedness. According to the results of the present research, self-efficacy beliefs help adolescence resist substance use and pressure of friends to consume drugs, and control their behaviors. In contrast, adolescents who do not have a positive attitude towards their abilities and consider themselves to be weak may form false expectations about substance and its consumption. They may consider substance as a way to enhance their abilities or to escape from thoughts related to weak abilities and feelings of humiliation or to compensate for perceived deficits of their abilities; therefore, they will form positive emotions and knowledge about substance. Since

attitudes include strong cognitions and emotions that may lead to avoidable behavior or strong attitudes, their vulnerability to substance is increased, and they are more likely to try substance use.

One of the limitations of this research was the nature of the statistical population. Future studies are suggested to duplicate this research in other provinces and with a more diverse group of adolescents from different cities to compare the results with the present study. It is also suggested to carry out longitudinal studies on the level of individuals' addiction preparedness and its associated implications, and test the moderating role of psychosocial factors in these relationships. Also, future research should be conducted on designing interventions that reduce the vulnerability of adolescents to depression and increase their beliefs about their abilities, and evaluate their effectiveness through the reduction of risky behaviors, especially drug use.

Conclusion

In general, the results of this study indicated that individual attitudes to drug use act as a moderator in the relationship between self-efficacy and adolescents' addiction preparedness. Accordingly, changing positive attitudes towards drug use in adolescents is important for successful preventive and therapeutic interventions in this age group.

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