Prediction of addiction based on procrastination, distress tolerance, and perceived competence in senior high school girl students

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Original Article

Abstract

BACKGROUND: Transitional stages of life are one of the most dangerous times for more vulnerability to drug abuse. The purpose of this study was to predict addiction based on procrastination, distress tolerance, and perceived competence in senior high school girl students.

METHODS: The method of study was descriptive and correlational. The population of this study consisted of all senior high school girl students of Divandarreh, Iran, during the academic year of 2018-2019. Among them, 266 students were included in the study using multi-stage cluster sampling. The Iranian Addiction Potential Scale (IAPS), Procrastination Scale, Distress Tolerance Scale (DTS), and Perceived Competence Scale for Children (PCSC) were used for data collection. Data were analyzed by Pearson correlation and multiple regression analysis.

RESULTS: There was a significant positive correlation between addiction and negligence (P < 0.010). Moreover, addiction was significantly associated with distress tolerance (P < 0.010). But perceived competence was not able to predict addiction tendency (P > 0.010). Regression analysis revealed that 21% of the variance of addiction tendency could be explained by procrastination, distress tolerance, and perceived competence.

CONCLUSION: According to the findings of this study, it is necessary to emphasize on these psychological characteristics in educational programs and prevention and treatment of addiction in schools.

KEYWORDS: Forecasting; Drug Users; Procrastination; Self Tolerance; Professional Competence

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Introduction

Despite decades of social, legal, and medical solutions, drug use is still one of the biggest social problems. Efforts on the cause of addiction have shown that people with drug abuse do not follow a specific psychosocial model. In fact, drug abuse is affected by a set of social and psychological factors on one hand and biological and pharmacological factors on the other hand.[1] Based on the epidemiological studies, drug abuse has increased dramatically during adolescence. According to statistics, the age of the first drug abuse is 17 years, on average.[2] The tendency to use drugs in many people begins at senior high school, which needs control and prevention.[3] Studies have shown that the most dangerous time for more vulnerability to substance abuse is transitional life stage. Due to the particular emotional conditions of this period and the changes due to puberty, preparedness for the problem of adaptation and turning to smoking, alcoholic beverages, and other materials is provided.[4]

As noted, studies on the etiology of the general population have shown that the drug abuse affected by complex interaction is a set of biological, psychological, family, and social

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factors. Procrastination is one of the psychological and individual factors that can cause many abnormalities and tendency to use drugs. The procrastination is a daily tendency to postpone work, despite being aware of its negative results,[5] which can be explained through cognitive, emotional, and motivational factors.[6] Procrastination involves some types of unpleasant negative feelings that dissuade a person from doing or starting a work. Negative and low evaluation of personal capabilities often leads to fear of failure, and can ultimately lead to drug abuse.[7] Procrastination behaviors cause painful psychosocial effects; therefore, stopping these issues requires high coping power,[8] which is also mentioned that in high school students this ability is low, which causes specific injuries, including the tendency to consume drugs.

In addition to procrastination, one of the other variables associated with high-risk behaviors is tolerance of distress. Distress tolerance is a variable of individual differences that defines how people respond to negative emotions and their ability to withstand unpleasant inner states.[9] It refers to the ability and tolerance of negative psychological situations.[10] People with low distress tolerance struggle to deal with their negative emotions, and when exposed to stress and tension, they have trouble adjusting and controlling their excitement, and therefore, they look for strategies that by using them, in the shortest time, this feeling of tension can be eliminated and the person reaches an instant pleasure; among them inefficient strategies can be the use of high-risk behaviors such as drug abuse, alcohol, and others.[11] Sheykholeslami et al. showed a negative relationship between behavioral activation, cognitive flexibility, and distress tolerance with drug use tendency.[12] Besides, findings from community-based and psychiatric society show that distress tolerance is inversely proportional to a range of maladaptive behaviors such as antisocial

behavior, deliberate self-harm, overweight behaviors, and especially alcohol consumption and drug abuse.[13]

The other psychological component that is effective in the tendency to addiction is perceived competence.[14] Ya'ghoobee et al. defined perceived competence as personal beliefs of individuals or their predictions about their functions and abilities. Another definition of perceived competence refers to the perception of one's ability to control his or her environment and position.[15] The results of the research by Nikmanesh and Yari in 2012 showed that the perceived ability by the individual was an important component of his performance and was a positive emotional experience. On the other hand, inferiority perception led to cynical thinking about himself, and this in turn, led to negative reactions, including distraction, anger, and other problems.[16]

Despite the fact that in various studies, the role of individual factors in the onset and continuation of addiction is always discussed, the extent of the impact of each individual's characteristics on the individual's tendency to addiction is unclear. Given that there have been quantitative studies in the field of knowledge of the progression and the predisposing factors to the tendency towards addiction in our country, we are going to look at some variables that may predict addiction trends in students. Therefore, the present research intends to answer the question of whether addiction tendency can be predicted based on procrastination, distress tolerance, and perceived competence.

Materials and Methods

In the present descriptive-correlational study, the relationship between procrastination, distress tolerance, and perceived competence (predisposing variables) with the tendency to drug use (criterion variable) has been investigated. The statistical population of this

study was all girl senior high school students in Divandarreh city, Iran, in the academic year of 2018 to 2019. Based on the inquiry from the Education Department, this city included 1012 students. The sample size was 280 students based on the Cochran table. Due to the widespread nature of the research community in the city, the sample was selected as a multi-stage cluster. Thus, at first, four secondary schools were chosen randomly from senior high schools in Divandarreh city. Then, from among the classes of these schools, 15 classes were selected randomly. Subsequently, 280 students were selected as the sample of the students. By referring to these schools, questionnaires were distributed among the students and they were explained about the purpose and method of completing the questionnaires. Finally, the questionnaires were analyzed by 266 of them. The criteria for entering the study included being a student in one of the four schools listed, completing a complete questionnaire, and satisfaction with the participation of the research, and exclusion criteria included lack of employment in selected schools and failure to complete the questionnaires. It was necessary to answer completely randomly and under the time limit. In this research, four types of tools for measuring variables were used.

The Iranian Addiction Potential Scale (IAPS): The IAPS is an Iranian addiction readiness scale, which was made according to the psychosocial condition of Iranian society by Zargar et al.[17] This questionnaire has 36 items plus 5 lie detecting items.

The scale validity was calculated using Cronbach's alpha of 0.90, which is optimal. Scoring each question is based on a continuum from zero (completely disagree) to 3 (completely agree). Of course, this grading method will be reversed in questions 12, 15, 21, and 33. This questionnaire is a lie detector, which includes questions 12, 15, 21, and 33. In order to obtain the general score of the

questionnaire, the total sum of the scores for each question should be calculated. This score will range from 0 to 108. Higher scores represent the readiness of the respondent for addiction, and vice versa.[17]

Procrastination Scale: This scale is a self-report questionnaire of 16 items that Tuckman has designed based on the Likert spectrum. Responses are graded according to values of 1, 2, 3, and 4, respectively. Twelve items are scored directly and four items (7, 12, 14, 16) are reciprocally scored. Getting a high score on this scale represents a high turnaround. Tuckman reported the reliability of this questionnaire to be 0.86.[18] In the research of Manijeh and Fayyazi in 2010, the Cronbach's alpha was 0.71, which indicates that the questionnaire is highly reliable. Validity of the questionnaire was confirmed by experts and the Cronbach's alpha coefficient was used to confirm its reliability. The Cronbach's alpha value was 0.71 which indicates high and desirable reliability of the questionnaire.[19]

Distress Tolerance Scale (DTS): This scale is an emotional disturbance tolerance index developed by Simons and Gaher to measure disturbance tolerance.[10] Examples of this scale measure distress tolerance based on individual's ability to withstand emotional disturbance, mental disturbance, distraction, attention to negative emotions in case of occurrence, and regulatory actions to relieve confusion. This questionnaire contains 15 items and four components of tolerance, appraisal, absorption, and regulation. The items of this scale are graded according to the 5-point Likert scale (strongly agree, mildly agree, feel neutral, mildly disagree, strongly disagree), Each item was given a score of 1, 2, 3, and 4. But this scoring is reversed in the 6th item. High scores on this scale indicate great distress. Based on the data obtained from the present study, the alpha coefficients for tolerance, appraisal, absorption, and regulation components were 0.72, 0.82, 0.78,

and 0.70, respectively, and the alpha coefficient for the whole scale was 0.82. The within-class correlation after 6 months was 0.61. Azizi et al. in 2010 also reported Cronbach's alpha of this questionnaire to be 0.70 and the credibility of the test-retest was 0.79.[20]

Perceived Competence Scale for Children (PCSC): This scale is a self-assessment index that was designed by Harter to measure the competence of students. This scale has 27 items and four components of behavioral, educational, social, and physical qualities. PCSC has two opposing options. For example, some people like school and some do not like school. Each clause has two opposing answers (in my case, completely false; in my case somewhat incorrect), two agree answers are existed (in my case, to some extent correct; in my case, quite correct). The scoring of each of these options is based on the four-point Likert scale, 1, 2, 3, 4, respectively. The higher the score obtained from this questionnaire, the higher the perception of competence, and vice versa. In the research done by Bay et al. in 2017, the validity of this tool was confirmed by the professors and the Cronbach's alpha coefficient for the 4 subscales was 0.61, 0.68, 0.66, and 0.61, respectively, and that of the whole test was equal to 0.70. Also, the internal correlation of the factors was reported in the range of -0.260 to -0.050.[21]

To analyze the data in the descriptive statistics section, frequency, mean, and standard deviation (SD) were used and for statistical analysis and inferential statistics, multiple regression tests using SPSS software (version 22, IBM Corporation, Armonk, NY, USA) were used.

Results

Based on the research findings, 266 students formed the statistical sample. The demographic data of the subjects showed that the mean age of the students was 16.17 years and their average mean was 18.09. Besides, in terms of father's job, the highest frequency was related to nongovernmental occupations with 190 (71.4%) and the lowest was related to unemployed fathers with 7 (2.6%). Twenty-three respondents were assigned to the addiction tendency scores above the cut-off point (score 4.53 and above), which tended to be addicted. The descriptive data of the research variables are presented in table 1.

In order to investigate the predictability of procrastination, tolerance of distress, and perceived competence in addiction tendency, multiple regression analysis was used by simultaneous logon method (R = 0.46, R^2 = 0.21, adjusted R^2 = 0.20, F = 24.16, P < 0.010).

As shown, approximately 21% of the variance in drug use tendency in students based on variables of procrastination, distress tolerance, and perceived competence were predictable. Considering that F was calculated at a significance level less than 0.01, the linear regression model was significant.

Table 1. Descriptive statistics of variables studied

Variable	Subscale	Mean ± SD	Minimum	Maximum
Prediction of addiction	-	28.96 ± 10.41	6	76
Procrastination	-	37.70 ± 7.24	22	58
Distress tolerance	Tolerance	8.56 ± 2.72	3	15
	Appraisal	19.87 ± 4.53	6	30
	Absorption	9.95 ± 2.89	3	15
	Regulation	8.94 ± 3.20	3	15
	Total score of distress tolerance	47.33 ± 9.56	22	70
Perceived competence	Behavioral	39.00 ± 7.66	15	68
	Educational	21.23 ± 4.38	7	28
	Social	23.57 ± 4.81	10	32
	Physical	16.17 ± 4.14	6	24
	Total score of perceived competence	78.90 ± 14.35	38	136

SD: Standard deviation

Table 2 shows that the beta value for variables of procrastination and distress tolerance is 0.30 and -0.21 respectively, both of which are significant at P = 0.001. Considering the significance level and the beta, it can be seen that the procrastination variable positively predicted the readiness of addiction, but the distress tolerance variable predicted addiction prevalence negatively. Procrastination had a greater role in predicting drug addiction variables than distress tolerance. But the results indicated that the scale of perceived competence was not significant and could not predict the tendency to addiction.

Table 2. Multiple linear regression results for addiction prediction on the basis of procrastination, tolerance of distress, and perceived competence simultaneously

Variable	B	SE	β	T	P
Constant	27.02	6.75	-	4.00	< 0.001
Procrastination	0.44	0.09	0.30	4.96	< 0.001
Distress tolerance	-0.23	0.06	-0.21	-3.49	0.001
Perceived competence	-0.04	0.04	-0.06	-1.19	0.230

SE: Standard error

Discussion

The purpose of this study was to determine addiction prediction based on procrastination, distress tolerance, and perceived competence in senior high school girl students. The results of this study showed that there was a significant positive relationship between prediction of addiction and procrastination. In explaining this finding, it can be deduced that in specific and problematic situations, such as the conditions for procrastination, because of backwardness due to lack of time and high levels of stress and panic, one will sometimes resort to ineffective coping behaviors, among which positive attitude towards drug abuse is also conceivable. Findings of Hassan Abadi et al. showed that there was a difference between ineffective attitudes and work procrastination in addicts with a recurrence history and those

with no recurrence history.[22]

Since procrastination delays the onset of work or causes the avoidance of duty, it leads to feelings of guilt, incompetence, self-consciousness, anxiety, and depression. Predatory behaviors have high potential for painful psychosocial effects and need to have a high coping power that is not available in some people to cope with them. This causes specific injuries, including the tendency to consume drugs. Therefore, a direct relationship between two variables seems logical.[23]

Another finding of the study showed that there was a significant negative relationship between addiction and distress tolerance. In explaining this finding, it can be said that individuals with low turbulence in a false attempt to deal with their negative emotions are involved in behavioral disorder,[11] and by addressing some destructive behaviors such as drug use, they seek to relieve their emotional pain. An emotion-focused coping strategy such as using alcohol and other substances may result in people getting rid of negative emotions quickly. This strategy, in particular for those who suffer from low turmoil, is an appropriate method.[20,24]

Many researches on addiction have shown that people who have drug abuse have difficulty in the components of endurance and psychological stress, and have defects in the skills necessary to deal with their problems, and drug abuse is used as a way of coping in order to reduce the unwanted emotions caused by difficult situations.[24]

In addition, this study showed that there was not a significant relationship between prediction of addiction and perceived competence. In explaining this finding, it can be said that people who have well-defined, coherent, and almost stable competence perceptions have higher psychological health; therefore, it is less likely to use an abnormal and unhealthy method to solve their problem; so that when faced with undesirable and

stressful events, people who have a high sense of competence are more stable and do not accept negative thoughts about themselves and their abilities. Accordingly, perceptions of competence will help them to resist the desire to material and pressure of friends and control their behaviors.[25] On the other hand, those who have a high sense of perception have a higher sense of courage, and because they have high self-esteem and self-assurance, they easily ignore negative judgments of others about drug use.[26] But in this study, according to statistical analysis, there was no significant relationship between perception of competence with addiction tendency. As a result, it is not possible to say that adolescents and young people who are addicted have a low sense of competence. But confirmation or rejection will require further research.

One of the limitations of this research is the use of questionnaires with a lot of questions, which in subsequent studies, it would be better to use similar questionnaires with lower volume. Questionnaire were used to collect data, which could lead to bias and distortion in the response and also the fatigue of the subjects.

Conclusion

This study showed that worrying and distress tolerance was associated with the readiness for addiction in students and reduced the risk of addiction in students. Given the importance of the issue of addiction and its increasing prevalence and the decline in the age of addicts, it is recommended that Iranian Ministry of Education should allocate one hour of weekly school curricula to officially provide self-care education and correction of family communication patterns by knowledgeable professionals. In addition, educators and tutors who work in education, using the results of this study, should hold social prevention meetings with the presence of psychologists for students.

Conflict of Interests

Authors have no conflict of interests.

Acknowledgments

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