

Research Article

Factors Affecting the Tendency towards Addiction with an Emphasis on Aggression among Paramedical Students in Iran

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A B S T R A C T

Background: Drug abuse has been dramatically increasing in recent years among university students. Aggressive people are more inclined to use drugs and become addicted.

Objective: This study was conducted to determine the factors affecting the tendency towards addiction with an emphasis on aggression among paramedical students.

Methods: The present cross-sectional study was conducted on 280 undergraduate students, selected through stratified random sampling, at Guilan University of Medical Sciences in Iran. Data were analysed by using descriptive and analytical statistics.

Results: A total of 85.4% were little inclined towards addiction and 67.5% had a low level of aggression. The level of aggression correlated significantly with the tendency towards addiction. Gender (male), field of study (health), parents' occupation, and history of drug abuse among family and friends correlated significantly with the tendency towards addiction too. Aggression was significantly correlated with the history of drug abuse among family and friends and socialisation with addicts.

Conclusion: Aggression is considered a predictor of the tendency towards addiction among university students. University counselling centres should consider organising educational workshops to reduce aggression and help prevent the students' tendency towards drug abuse and addiction.

Keywords: Aggression, Substance-Related Disorders, Paramedical

Background

In recent years, drug abuse has been dramatically increasing across the world^{1,2} and the tendency towards addiction has become a serious global problem.^{3,4} Lots of men and women, especially from adolescence to middle age, use drugs and have become dependent on them.⁵ Drug abuse imposes heavy costs on the healthcare, social and even political systems of countries.⁶

The United Nations Office on Drugs and Crime has estimated the number of substance abusers among those aged 15 to 64 years as 208 million, accounting for 5% of the entire world population.⁷ According to the Iranian Legal Medicine Organization, drug abuse has been the second cause of death by natural causes (after road and traffic accidents) from 2009 to 2011 in Iran.¹ As shown in a study by Jalilian, a history of cigarette smoking, alcohol drinking and drug use was seen in about 19.4%, 10.1%, and 3.9% of the respondents respectively.⁸

The rapid growth of drug use and its related problems among university students lead to loss of academic motivation, academic failure, aggressive behaviours, and identity loss.^{5,9} According to the National Institute on Drug Abuse in 2015, the prevalence of alcohol and cigarettes among those aged between 18 and 25 years was 82.4% and 53.3%.¹⁰ It should be noted that young people are four times more likely than others to get addicted in their first encounter with drugs. As the most susceptible group, young people are at great risk of addiction.¹¹ Over-consumption of alcohol was found to be a chronic problem on university campuses in different countries, which is a cause for serious concern in terms of public health.^{12,13}

The factors affecting addiction fall into three categories, including personal, family, and social factors.¹⁴ It can be argued that personal risk factors set the ground for starting smoking as a hobby, and starting smoking then creates a positive attitude towards alcohol and other drugs and prepares the mental and physical framework required for beginning their consumption.¹⁵

The family factors contributing to this phenomenon include family insecurity and instability, divorce, conflicts and tensions within families, working mothers, and parents' disputes. Discrepancies and conflicts between the parents are risk factors that may cause children to become friends with individuals who can be bad role models for them.^{16,17}

Aggression is an important personality trait that is very important in making people vulnerable to commit dangerous acts, such as a tendency towards drug use.^{18,19} Psychologists believe that aggressive behaviours are the main cause of psychological and behavioural problems among adolescents and youth.²⁰ A study of university students concluded that aggression, drug use and depression were significantly

correlated,²¹ however, a review study reported that only a minority of people who drank alcohol showed aggressive behaviours.²² The present study was conducted to examine the factors associated with the tendency towards addiction with an emphasis on aggression among the students. In this study alcohol, cigarette, hookah, and opium consumption was defined as an addiction.

Methods

Participants and Study Design

The present cross-sectional study was conducted on the population of undergraduate students, at Guilan University of Medical Sciences in Rasht, Iran (n = 2036) in the academic year of 2017-2018. The duration of the study was from 23 September 2017 to 22 June 2018. The sample population consisted of 280 undergraduate students enrolled in the first to fourth semesters of any of the faculties of the university, selected through stratified (each field was a stratum) random sampling.

Approval was obtained from the Ethics Committee of Guilan University of Medical Sciences for the study. Informed consent was taken from each participant prior to their inclusion in the project. The data collection tool used in this study consisted of a questionnaire that had three sections: a demographic information section, an aggression section, and a tendency towards addiction section.

The Demographic Information Questionnaire

This section inquired about items such as age (continuous), gender (M/ F), and field of study (categorical).

The Aggression Inventory Questionnaire

This questionnaire was developed by Zahedyfar et al. and is psychometrically established as a valid criterion for aggression evaluation based on the local socio-cultural characteristics for both genders.²³ According to factor analysis, three factors including 30 items; aggression (14 items), invasion and insult (8 items), and obstinacy (8 items) were included in this questionnaire. The items were scored based on a Likert scale (3 points for the response 'never', 2 for 'rarely', 1 for 'sometimes' and 0 for 'always') and the final score obtained ranged from 0 to 90. If the mean score was lower than 45, the level of aggression was deemed low.

The KMO test result was 85% that showed the appropriateness of all the factors. The total reliability of the inventory was confirmed with a Cronbach's alpha value of 0.87.²³

The Drug Addiction Tendency Questionnaire

This study used a standardised questionnaire for identifying people at risk for addiction that had its construct validity measured at Tehran University in 2010.²⁴ The questionnaire consists of 60 items, with six lie detection

items (14,28,42,51,57,60) extracted from the Minnesota Multiphase Personality Inventory(MMPI).

The responses to this research instrument were in the form of 'yes' (one point) and 'no' (zero point). The sum of the points resulted in a score that was compared against the criterion score of 26; if the resultant score was equal to or higher than 26, the individual was deemed at risk for addiction, but if it was lower than 26, the tendency towards drug use was regarded to be low. Statistical indices yielded this cut-off point of 26.²⁴

The reliability of the questionnaire was calculated as 0.88 using the Kuder-Richardson Formula. To review the content validity of the tool, it was distributed among 15 addiction experts (academic members: community health nursing, psychologist, and health promotion) for comments on the items. The inter-rater agreement (of academic members) coefficient was calculated as 0.91.

Data Analysis

The collected and coded data were entered into SPSS-21 for analysis using descriptive and inferential statistics, including Pearson's correlation coefficient and chi-square (χ^2).

Results

Demographic Data

According to the results, 53.6% of the students were female, 83.6% were single and 48.2% lived in dormitories. The age range of students was from 18 to 38 years (mean \pm SD = 21.75 \pm 2.90). 22.9% of students were in nursing and 23.6% in health. Almost 14% of students reported a history of addiction (alcohol, cigarette, hookah and opium) in their

family and 28.9% in their friends.

Correlation

According to the cut-off point (26) in the tendency towards addiction data, the mean score was 17.19 \pm 7.70, and 85.4% of the students were little inclined towards addiction. In terms of the cut-off point (45) in aggression inventory data, the mean score was 40.98 \pm 11.60 and 67.5% had low levels of aggression. The level of aggression correlated significantly with the tendency towards addiction among the students. Among the students with a high tendency towards addiction, 8% of them had low aggression and 27.5% had high aggression which was statistically significant ($\chi^2 = 18.97$, $p = 0.0001$).

Of the demographic variables examined, gender (male, 20%), field of study (health, 25.8%), parents' occupation (retired, 31.8%) and history of drug use among family (30.8%) and friends (27.2%) correlated significantly with the high tendency towards addiction in the students (Table 1). The correlation coefficient was significant between aggression score and addiction tendency in all age groups ($p = 0.0001$). The correlation between the aggression score and the tendency towards addiction was significant in both genders. The correlation coefficient between aggression score and addiction tendency was significant with marital status, history of drug use among family, friends and socialisation with addicted individuals (Table 2).

A significant relationship was observed between high aggression and the history of drug use among family ($\chi^2 = 5.43$, $p = 0.02$) and friends ($\chi^2 = 5.95$, $p = 0.01$) and socialisation with addicts ($\chi^2 = 8.16$, $p = 0.04$).

Table 1. Relationship between Tendency towards Addiction and Demographic Information

Variables		Low Tendency towards Addiction n (%)	High Tendency towards Addiction n (%)	Sig.
Gender	Female	135 (90.6)	14 (9.4)	$\chi^2 = 6.35$ $p = 0.01$
	Male	104 (80)	26 (20)	
Field of study	Nursing & midwifery	88 (89.8)	10 (10.2)	$\chi^2 = 9.23$ $p = 0.01$
	Health	49 (74.2)	17 (25.8)	
	Other	102 (88.7)	13 (11.3)	
Father's occupation	Businessman	90 (86.5)	14 (13.5)	$\chi^2 = 13.30$ $p = 0.01$
	Worker	16 (76.2)	5 (23.8)	
	Employee	94 (93.1)	7 (6.9)	
	Farmer	24 (77.4)	7 (22.6)	
	Retired	15 (68.2)	7 (31.8)	
Mother's occupation	Housewife	197 (87.6)	28 (12.4)	$\chi^2 = 8.41$ $p = 0.03$

	Farmer	-	1 (100)	
	Employee	27 (79.4)	7 (20.6)	
	Retired	15 (78.9)	4 (21.4)	
History of drug abuse by family	Yes	27 (69.2)	12 (30.8)	$\chi^2 = 9.96$ $p = 0.002$
	No	212 (88.3)	28 (11.7)	
History of drug abuse by friends	Yes	12 (72.8)	22 (27.2)	$\chi^2 = 15.28$ $p = 0.0001$
	No	28 (90.9)	18 (9.1)	

Table 2. Correlation Coefficient between Aggression Score and Addiction Tendency in terms of Socio-demographic Variables

(n = 280)

Socio-demographic Variables		N	Correlation Coefficient (Pearson)	P value
Age (years)	< 20	100	0.53	0.0001
	20-30	174	0.49	
	> 30	6	0.83	
Gender	Female	150	0.59	0.0001
	Male	130	0.41	
Marital Status	Single	234	0.53	0.0001
	Married	46	0.47	
History of drug use among family	Yes	39	0.49	0.0001
	No	241	0.50	
History of drug use among friends	Yes	81	0.38	0.0001
	No	199	0.53	
Socialisation with addicted individuals	Yes	108	0.45	0.0001
	No	172	0.50	

Discussion

The results of this study showed that the majority of the students were little inclined to addiction, and more females have low addiction tendency, while some studies show an increase in students' tendency towards addiction in both genders.²⁵⁻²⁷ A potential reason for the disparity in the prevalence of this tendency is the different definitions provided of the phenomenon of drug use. As an author's opinion, the reasons for the lower tendency towards addiction in the present study may be due to the young subjects' greater awareness about the harmful effects of drug use and the parents' stricter supervision of their children's relationships as another study found that the awareness level in medical students is higher than other students.²⁸

The majority of the students showed low levels of aggression. However, the results of the study by Sacco et al.²⁹ showed a tendency towards aggressive behaviours in youth (male). A significant difference was also observed in the present study between high tendency towards addiction and the variables of gender (men), field of study (health),

parents' occupation (retired), and history of drug use among family and friends, which is in line with the results obtained in a similar study.³⁰ Another study showed that the mean score of the tendency towards addiction was significantly higher in the male students and the students who had drug-addicted friends.³¹ Students with more aggression tend to focus more on narcotics, and if the environmental situation increases the severity of these features, it will lead to some risky and harmful behaviours such as drug use.³²

The parents' inability to establish proper constructive communication with their children can lead to children's emotional deprivation, which may persist into their adulthood and direct them towards addiction. It can therefore be argued that living in an intimate family environment with parents who have proper supervision and control over their youth can help the children stay away from drug use and addiction, and thus, students who live with their family consume less drugs and alcohol.^{33,34}

This study also showed that aggression is significantly related to history of drug use among family, friends, and to socialisation with addicts, while other studies reported

aggression among younger age^{35,36} married, smoker students³⁷ and at lower levels of education.³⁶ Compared with our study, it can be said that this lack of consistency may be justified by noting how older age and higher academic degrees increase the individual's awareness of his behaviours and consequently his control over them and make him show less unreasonable behaviours in stressful situations.

The results showed that there is a significant relationship between addictive tendency score and aggression variables based on gender (higher in female students than their male counterparts). A few other studies showed that the tendency towards addiction was higher in the female students than the male ones.^{31,38} Another study by Minutillo et al. showed no difference between the genders in terms of the tendency towards addiction.³⁹ A few other studies have also reported a higher prevalence of drug use among young women compared to young men and have revealed a positive relationship between the female gender and smoking and alcohol abuse,^{40,41} which is consistent with the present findings.

The results showed a higher tendency towards addiction among students in health sciences compared to students in other fields of study. Other studies have also shown a greater tobacco use in most physiotherapy, nursing, and medical students⁴² as well as in occupational health students⁴³ and students of sociology, nursing, and medicine.⁴⁴

In this study, the tendency towards addiction correlated significantly with the history of drug abuse among family and friends and socialisation with drug users. Other studies have also shown that socialisation with addicted friends and having a history of drug abuse in the family can increase the risk of the tendency to consume drugs,^{45,46} which is consistent with the present findings.

To conclude, socialisation with addicted friends stimulates the sense of curiosity among the youth and makes them inclined towards addiction. Strong emotional bonds between the family members can help create an intimate family environment and the family's proper supervision of their children's choice of friends and their type of relationships, especially in the case of boys, can help prevent drug abuse and can eliminate the tendency towards addiction in this group.⁴⁷

The present study also revealed a higher level of aggression in the students who had a tendency to develop addiction and thus found a significant correlation between the tendency towards addiction and aggression, which is in line with the findings of previous studies.^{19,29} A study showed that alcohol consumption was associated with increased levels of aggression while marijuana abuse was inversely associated with aggressive behaviours. It can therefore be

argued that aggressive individuals use drugs not only for pleasure, but also to overcome and suppress their inner feelings.⁴⁸ Their aggressive behaviours may also cause their rejection and abandonment by friends, which makes them turn to illegal social circles and drug use.

Limitations

Since addiction is a social taboo in the Iranian society, the students' prudent answers to the questions may be construed as a limitation of this study, which makes the generalisation of the results a matter to be pursued with caution.

Conclusion

Based on the results of this study, it can be concluded that the majority of the students were slightly inclined towards addiction and they had low levels of aggression. Given that aggression is considered a predictor of the tendency towards addiction among university students, university counselling centres should hold workshops and teach their students different aggression control techniques suitable for use in different situations and thus help eliminate the tendency to consume drugs and addiction in this group.

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Conflict of Interest: None

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