

## **Comparison of Mental Health, Aggression and Hopefulness between Student Drug-Users and Healthy Students (A Study in Iran)**

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### **Abstract**

**Background:** Addiction is a social problem and a destructive phenomenon; like other social diversions, addiction destroys the country's most valuable assets, which are obviously the youth and the adolescents. In this regard, this study has been performed with the aim of comparing the mental health, aggression, and hopefulness of student drug-users and healthy students.

**Methods:** The study has been performed by descriptive-analytical method among students of Kerman's universities in Iran. The study sample contained 520 people who were selected using a stratified random sampling method. Three questionnaires including General Health Questionnaire (GHQ-28), Buss-Perry Aggression Questionnaire (BPAQ) and Miller Hopefulness questionnaire have been used for data gathering. In this study, the student drug-users are those who use a substance (cigarettes, hookah, alcohol, opium, etc.) at least once a week.

**Findings:** Findings showed that out of the 520 people under-study, 34.62% (180 people) are drug users, by whom the percentages of different substances used are as following: Hookah: 38.33%; Cigarettes: 28.35%; Alcohol: 20.55%; Opium: 5.55%; Cannabis: 2.23%; Heroin: 1.12%; Crack: 0.55%; Glass: 1.66 % and Psychotropic Pills and Ecstasy: 1.66%. A significant difference was observed in comparing the mental health, aggression, and hopefulness of student drug-users and healthy students ( $P < 0.05$ ), so that the student drug-users had lower mental health and hopefulness and showed more aggression than the healthy group.

**Conclusion:** Substance abuse endangers the mental health of people and drug-users show more aggression and are less hopeful.

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**Keywords:** Mental health, Aggression, Hopefulness.

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## Introduction

Addiction is considered to be a chronic mental disorder that due to its progressive nature in all aspects of life, its adverse effects can be seen clearly on the patient's mental, physical, social, emotional, spiritual and cognitive health.<sup>1</sup> In recent years, increase in the rate of substance (drug) use, age reduction of substance abuse onset, emerging of dangerous diseases like AIDS and its relation with drug use, increase in the number of drug-related prisoners and the resulting devastating personal, social, educational, economic, cultural consequences together<sup>2</sup> with the introduction of other new synthetic or laboratory substances, such as X pills, glass, crack and etcetera..., to the drug market and their popularity among some youth has lead to the addiction problem becoming one of the most important and serious priorities of all the planners and officials in all social areas.<sup>3</sup>

Based on recent statistics of addicts, one million and 200 thousand drug addicts live in the country, of which, five percent use synthetic and hallucinogenic drugs.<sup>4</sup> The annual growth rate of addiction in the country is about 8%, while the annual population growth rate is about 6.2%; therefore, the number of addicts grows more than 3 times the population's growth per year. Moreover, the drug-users 20-24 years old population has risen from 11.7% in 1377 to 17.3%.<sup>5</sup> The statistics also show that the rate of substance use among various communities, especially among adolescents and young adults has increased significantly in the recent decade.<sup>6</sup>

The results of a performed research on 610 male students of pre-university level in the city of Kerman showed the the amount of drugs used by the students as following: Cigarettes: 34.6%; Hookah: 51.5%; Alcohol: 37.7%; Sedatives: 40.7%; Ecstasy: 6.6%; Cannabis: 6.7%; Heroin: 4.9%; Opium: 8.7% and Snus: 9.7%.<sup>7</sup>

Research results show that addicts have a lower mental health level,<sup>8,9</sup> are more aggressive<sup>10,11</sup> and less hopeful<sup>12</sup> than non-addicts. The most common psychiatric disorders among drug users include borderline personality and anti-social disorders, depression, hopelessness, anxiety,<sup>13</sup> paranoia, aggression, schizoid,<sup>14</sup> low tolerance level, intense feelings of inferiority and dependence.<sup>15</sup> Aggression and maladaptive behaviors are associated with drug use onset.<sup>16</sup> The mental

health of smoker students is less than the non-smoker students.<sup>17</sup> 37% of those who abuse alcohol and 53% of patients with drug abuse suffer from at least one serious mental illness.<sup>18</sup> The findings of a research performed on 172 addicts (162 males and 10 females) with the mean age of 32 years showed that the most common psychological problems of participants in the research was feeling of anxiety, frustration and loneliness. The 68.8% of patients suffer from depression, 56.4% show aggression and 26.3% of them have experienced suicidal ideas due to their frustration and loneliness.<sup>19</sup>

Since the students play an important role in the economic and social development programs and management of community affairs, paying attention to their issues in different dimensions, particularly their mental aspect should not be neglected. Therefore, in this research, we decided to study the mental health, aggression and hopefulness among addicted and non-addicted students.

## Methods

This study has been performed by a descriptive-analytical method. The Statistical population of the study consisted of all the male and female students of the universities of Kerman, which were collectively 39000 students in the academic year of 89-90. The number of the desired sample was determined as 520 subjects and the stratified random sampling method was used for sampling proportional to the population size. To collect information, a researcher-made questionnaire containing information on age, sex, approximate duration of drug use (less than 1 month, 2 to 3 months, 4 to 6 months, 7 to 12 months, 1 to 2 years and more than 2 years), onset of drug use, frequency of drug use per week (less than once per week, once per week, 2 to 3 times per week, 4 to 5 times per week, more than 5 times per week), family history of addiction and Mental Health Questionnaire (GHQ-28), Miller Hopefulness Questionnaire and Buss and Perry Aggression Questionnaire have been used. In this study, the student drug-users are considered as those who use drugs at least once per week (cigarettes, hookah, alcohol, opium, and etcetera).

Goldberg and Hillary Mental Health Questionnaire (GHQ-28): This questionnaire

consists of four sub-scales of disturbance in physical symptoms, disturbance in sleep and anxiety, impairment in social functioning and depression, each of which has 7 questions. The scores below 23 of total in this questionnaire indicate high mental health; the scores between 23 and 37 indicate moderate mental health and the scores above 37 indicate a low mental health or having mental problems. The calculated validity coefficient of this questionnaire by Cronbach's alpha method has been reported for the entire test and its subscales, respectively, as 0.89, 0.76, 0.8, 0.5 and 0.85.<sup>20</sup> The performed studies in Iran have also calculated the validity of this questionnaire as good and excellent levels.<sup>21</sup>

**Miller Hopefulness Questionnaire:** This test is a diagnostic test that contains 48 questions; it is an aspect of hopefulness and frustration that the mentioned items have been chosen based on overt or covert behavioral manifestations in hopeful or desperate people. The questionnaire range is based on the Likert scale (strongly disagree with score 1 ....strongly agree with score 5), in which each person scores by selecting a sentence that describes his conditions correctly. The range of obtained scores is variable from 48 to 240 and if one earns 48 scores, he is considered completely helpless and the score of 240 indicates maximum hopefulness. Scores below 144 indicate low hopefulness and scores above 144 show high hopefulness. 12 questions of Miller questionnaire (11, 13, 16, 18, 25, 27, 28, 31, 33, 34, 38 and 39) consist of negative items and their evaluation and scoring are calculated reversely. Many studies have reported acceptable validity<sup>22</sup> of the questionnaire and the reliability of the questionnaire has been calculated by Cronbach's alpha and bisection methods respectively as 0.9 and 0.89.<sup>23</sup>

**Buss-Perry Aggression Questionnaire:** It is a self-reported instrument that contains 29 expressions and has four subscales as physical aggression, verbal aggression, anger and

hostility.<sup>24</sup> The answers in this questionnaire are based on a 5-grade Likert scale (quite similar to me (5) ... is not similar to me at all (1) and items 9 and 16 have a reverse grading. The scores above 80 in the entire questionnaire indicate high aggression and the scores below 80 indicate low aggression. The Cronbach's alpha coefficient for total scores of questionnaire is 0.89 and is reported for subscales as physical aggression: 0.85; verbal aggression: 0.72; anger: 0.83 and hostility: 0.77.<sup>25</sup> The validity of the questionnaire has been noted as appropriate.<sup>26,27</sup>

## Results

The types of drugs used by students and their frequencies are listed in table 1.

The statistical indicators of research variables are presented in table 2.

The results of table 3 shows that 180 of 520 studied students (34.62%) use drugs and 340 students (65.38%) are healthy. The table results suggest that there is a significant difference among mental health, aggression and hopefulness of healthy students and drug-using students ( $P < 0.001$ ); in other words, the healthy students are more hopeful and mentally healthy and less aggressive than those using drugs.

Table 1. Frequency and frequency percentage of drug types used by students

Used drug type	Frequency	Frequency Percentage
Hookah	69	38.33
Cigarette	51	28.35
Alcohol	37	20.55
Opium	10	5.55
Hashish	4	2.23
Heroin	2	1.12
Crack	1	0.55
Glass	3	1.66
Ecstasy pill	3	1.66
Total	180	100

Table 2. Descriptive indicators of mental health, aggression, and hopefulness scores of subjects

Variable	Average	SD	Minimum score	Maximum score
Mental Health	29.11	14.66	4	74
Aggression	69.00	14.24	37	109
Hopefulness	141.25	18.95	77	200

N = 520

**Table 3.** Comparison of mental health, aggression and hopefulness profiles of drug-using students and others

Variable	Drug-user students		Others	P-value
	Frequency (%)	Frequency (%)	Frequency (%)	
Mental Health	Low	60	76	< 0.500
	Moderate	50	100	
	High	70	164	
Aggression	Low	93	307	< 0.001
	High	87	33	
Hopefulness	Low	151	140	< 0.001
	High	29	200	

## Discussion

The findings of this study showed that of the 520 cases studied, 34.62% (180 people) are drug-users; of this number, the percentages of the usage of different drugs are as following: hookah: 38.33%; cigarettes: 28.35%; alcohol: 20.55%; opium: 5.55%; cannabis: 2.23%; heroin: 1.12%; crack: 0.55%; glass: 1.66% and Ecstasy: 1.66%. This finding is consistent with the results of a study that has examined the prevalence of drug use among 827 students. The research findings suggest that 30.1% of students use drugs as following: cigarettes: 36.26%; alcohol: 17.4%; opium: 3.86%; cannabis: 2.78%; Ecstasy: 2.05%; heroin: 1.08%; crystal: 0.84%; morphine: 0.6% and other drugs: 0.6%. Another study showed that 24% of students use cigarettes, 34% use hookah, 17% use alcohol, 2.3% use opium, 2/2% use cannabis and 0.7% use ecstasy, which confirms the results of this research.<sup>28</sup>

According to the study results, the mental health of drug-users is significantly less than the mental health of healthy and nondrug-users, which is consistent with the results of many studies. The results of researches showed that the life quality and mental health of drug addicts are less than non-addicts. There are significant differences between mental health components of healthy and addicted people.<sup>8</sup> Derek found that 53% of patients with substance abuse have at least one serious mental illness. 31% of addicts in the sample had low mental health. To explain the reasons of suggesting such a hypothesis, we can mention factors such as more drug use by patients with mental disorders and reduction of people's skills in coping with substance abuse following the existing mental disorder and resulting easy tendency toward drug use. Besides high and staggering costs of substance abuse, it has many negative consequences such as mental disorders that are so difficult for addicts to control.

The research findings suggest that drug-users have more aggression than non-addicts. The results showed that phobia, hostility, aggression, anxiety, depression and disorder symptoms level are higher in addicts than non-addicts based on psychotic scales.<sup>12</sup> There is always a positive correlation between aggression and drug use.<sup>29</sup> Gera (2004) in his experimental study that was performed on 20 cases of heroin-dependent individuals and 20 healthy subjects concluded that violent responses were significantly higher in addicts compared to non-addicts. A significant relationship was found between drug exposure (history of substance abuse) and aggression level. The addicts show more aggressive behaviors and irritability. When the drug does not reach the addict's body or in other words, the addict experiences deprivation, he or she shows symptoms of mental imbalance in addition to physical symptoms. The prominent feature of this condition may be aggressiveness, impulsivity, and disturbed interpersonal relationships. Anxiety and depression are also among the main consequences of addiction or drug dependency, which themselves create a chain of other disorders. In addition, the addicted person thinks of how he or she appears to others and how he/she is being judged by the society. Therefore, the judgment of others makes him/her feel shame and this causes him/her to be aggressive and rebellious. Anger control training can be effective in reducing aggression in these patients and can cause them to show an effective and appropriate response to environmental stimuli. Moreover, these people can increase their restraint, feeling of self-efficacy and social skills using self-relaxation and positive self-talking.

Other results showed that hopefulness in healthy individuals is significantly more than drug-users. Research results showed that the most common mental health problems in

patients with substance abuse include feelings of anxiety, despair and loneliness; a result which is consistent with the current study's findings.<sup>12,19</sup> In explanation of this hypothesis we should say that a person, whose mental health is low, experiences despair and depression in dealing with important events in his/her life; so we can say that these two components are interdependent and man needs hope as a necessary factor to create positive and negative life situations that require compatibility and accordance; otherwise, he considers negative events as a threat to his safety and welfare, and tolerance in ambiguous and uncomfortable situations of life brings him to his knees and disrupts his normal life routine and finally, the person may tend to use drugs to relieve the tension caused by these problems.

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This study has a limitation that should be considered in interpreting the results. In cross-sectional studies, considering the indeterminacy of temporal relationship, the causality cannot be realized and the role of cause and effect cannot be determined.

The findings of this research may help the policy-makers in addiction prevention issues, educational authorities, parents and counselors of drug addiction treatment and rehabilitation centers to anticipate and plan educational programs to increase the mental health and hopefulness and reduce aggression among the youth, especially those using drugs, in order to take further steps toward the improvement of the mental condition of society.

**Conflict of Interest:** The Authors have no conflict of interest.

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## مقایسه سلامت روان، پرخاشگری و امیدواری در بین دانشجویان مصرف کننده مواد و دانشجویان سالم

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### چکیده

**مقدمه:** اعتیاد یک مشکل اجتماعی و پدیده‌ای مخرب است که همانند سایر انحرافات اجتماعی پرارزش‌ترین سرمایه‌های کشور یعنی نوجوانان و جوانان را به نابودی می‌کشاند. در این راستا پژوهش حاضر با هدف، بررسی مقایسه سلامت روان، پرخاشگری و امیدواری در بین دانشجویان مصرف کننده مواد و دانشجویان سالم انجام شد.

**روش‌ها:** تحقیق حاضر به روش توصیفی-تحلیلی و در بین دانشجویان دانشگاه‌های شهر کرمان (۳۹۰۰۰ نفر) در سال ۱۳۹۰ انجام گرفت. حجم نمونه تحقیق ۵۲۰ نفر بود که با روش نمونه‌گیری تصادفی طبقه‌ای انتخاب شدند. برای جمع‌آوری اطلاعات از سه پرسش‌نامه سلامت روان (GHQ-۲۸)، امیدواری Miller و پرخاشگری Buss-Perry استفاده شد. در این پژوهش منظور از دانشجویان مصرف کننده مواد، افرادی بودند که حداقل یک بار در هفته مواد (سیگار، قلیان، مشروبات الکلی، تریاک و ...) مصرف می‌کردند.

**یافته‌ها:** از تعداد ۵۲۰ نفر نمونه مورد بررسی، ۳۴/۶۲ درصد (۱۸۰ نفر) مصرف کننده مواد بودند که از این تعداد ۳۸/۳۳ درصد قلیان، ۲۸/۳۵ درصد سیگار، ۲۰/۵۵ درصد مشروبات الکلی، ۵/۵۵ درصد تریاک، ۲/۲۳ درصد حشیش، ۱/۱۲ درصد هرویین، ۰/۵۵ درصد کراک، ۱/۶۶ درصد شیشه و ۱/۶۶ درصد قرص‌های روان‌گردان و اکستازی مصرف می‌کردند. در مقایسه سلامت روان، پرخاشگری و امیدواری دانشجویان مصرف کننده مواد و دانشجویان سالم اختلاف معنی‌داری مشاهده شد ( $P < 0/05$ )؛ به طوری که مصرف کنندگان مواد از سلامت روان و امیدواری پایین‌تر و پرخاشگری بالاتری نسبت به گروه عادی برخوردار بودند.

**نتیجه‌گیری:** سوء مصرف مواد، سلامت روانی افراد را به خطر می‌اندازد. افراد با سلامت روان و امیدواری پایین به احتمال زیاد دچار سوء مصرف می‌شوند و دارای پرخاشگری بیش‌تری می‌باشند.

**واژگان کلیدی:** سلامت روان، پرخاشگری، امیدواری.

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