

Original Article

Suicide in Narcotic Drugs Dependents

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Abstract

Background: The problem of addiction is one of the four global crises. These patients are more vulnerable to mental disorders. This study aimed to examine the risk of suicide in drug dependent patients.

Methods: In this cross-sectional study, patients who referred for addiction treatment were selected and the control group was chosen among their companions who did not have narcotic drugs dependence. Suicide risk was assessed through California Suicide Risk Assessment Questionnaire. Beck's Depression Inventory questionnaire was used to assess the depression level.

Findings: The comparison of average education ($P < 0.01$) and the unemployment rate ($P = 0.03$) and previous attempted suicide ($P = 0.01$) between the narcotic drug dependent group and control group showed a statistically significant difference. Suicide risk score ($P < 0.01$) and depression score ($P < 0.01$) differences were statistically significant. The average scores of depression score in addicts was significantly associated with their previous attempted suicide ($P = 0.01$). In the control group, there was a significant association in suicide score and depression score with their previous attempted suicide ($P < 0.01$). Suicide score were compared based on the depression degree in both groups and statistically significant differences were found ($P < 0.01$).

Conclusion: The suicide risk and depression in drug addicts are more than general population and they are closely related to each other.

Keywords: Suicide, Depression, Narcotic drugs.

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Introduction

Taking addictive substances like psychotropic substances, alcohol, cocaine and other drugs has existed since ancient times.¹ The problem of addiction is considered as one of the four global crises² and has caused many problems in our country, too. These patients are more vulnerable to mental disorders. The phenomenon of drug abuse, apart from the costs that it imposes on society, has many implications for research on psychiatric issues.

Symptoms of depression in people with drug abuse or substance dependence are common. One third to half of them are eligible for diagnostic criteria for major depressive disorder one time in their lifetime and successful suicide rate among them is almost 20 times more than normal people.³ Rate of suicide among these patients has been reported 8 to 17 percent.⁴

Because having illegal drugs is socially unacceptable, the amount of real available substances has remained hidden. Therefore, no reliable estimation of consumption among the population is possible.⁵ In most countries an increase in drug-taking is seen. Low level of education and income are predictive factors of dependence throughout life. About 14.8% of addicted people suffer from unemployment.^{1,2}

Factors such as psychodynamic, behavioral, genetic, neurotic, chemical, personal and social factors have causal role in dependence on substance taking and abuse. Strong religious beliefs play a protective role in reducing drug-taking, suicidal thoughts and depression in women and being religious is related to lower rates of drug-taking in men but is not accompanied by reduction of depression and suicidal thoughts.⁶

About 90% of people with narcotic substance dependence face another psychiatric disorder among which major depressive disorder, alcoholism, antisocial personality disorder and anxiety disorders are the most common.³ Depression specially influences and is influenced by substance taking disorders and a course of antidepressant treatment should be considered.⁷

Negative moral assessment and suicide attempts are among the important predictive factors for hospitalization.⁸ Depression is also traced in addiction to other substances such as drugs.⁹ people who have drug dependence and

suicide attempts show more anger, hostility and irritability.¹⁰ About 1 percent of all deaths are related to suicide and suicide is one of the 11 leading causes of death among Americans.^{5,11} The suicide rate is dependent on age and it increases after maturity. The age of drug-taking is lower in people who take substance and have suicide attempts.^{3,10}

Suicide among psychiatric patients is 3 to 12 times more common. It was shown in a study that there was a significant relationship between nicotine dependence, independent of psychiatric disorders and physical diseases, and suicide attempts.^{12,13} In a study, among the most powerful psychological estimators of suicide risk, bipolar disorder was assigned to men, substance taking disorder to women.¹⁴ In some other studies, the highest rate of suicide was reported among depressed people.^{3,15} Epilepsy could be pointed as the most common medical reason for suicide with a rate of 4 to 5 times more than normal population.¹²

There have been previous suicide attempts in approximately 50 percent of people who have had successful suicide. One-third of them were unemployed and three quarters of them lived alone and committed suicide usually in the first few months after hospital discharge.¹ Given the importance of the issue, this study aimed to examine the risk of suicide in drug dependent patients which came for addiction treatment.

Methods

In this cross-sectional study, hospitalized patients in the Shahid Beheshti Hospital of University of Kerman, Iran, for addiction treatment were selected. They were grouped in opiate dependent patients according to DSM-IV. Control group was selected among their fellows who did not have narcotic drug dependence. All subjects were selected among men with no age and job limitations.

Evaluation of suicide risk was done through California Suicide Risk Assessment Questionnaire¹⁶, which contains 15 items and any answer receives its related score. Finally the total score is calculated (between 0 to 925) and the risk of suicide will be categorized in five levels as very low which means less than 1%, low that is between 1 to 2.5%, middle that means a risk of 2.5 to 5%, severe which means between 5 to 10% and very severe that is a risk

of more than 10%. Education, job, marital status, drug type, duration of addiction, dose of substance, the number of previous treatments and number of previous suicide attempts, were also included in the questionnaire.

Beck's Depression Inventory questionnaire was used to assess the depression level. This questionnaire contains 21 questions and each question is given a score from zero to 3. Total scores can range from zero to 63 and a score higher than 16 is considered as depression. A score from 0 to 9 indicates absence of depression (normal ups and downs), 10 to 15 indicates mild mood disturbance, 16 to 20 indicates borderline clinical depression, 21 to 30 indicates moderate depression, 31 to 40 indicates severe depression and over 40 indicates extreme depression.¹⁷

70 subjects were determined as the sufficient sample size for each group using Cochran formula. Data was analyzed by SPSS for Windows (version 15; SPSS Inc., Chicago, IL, USA) using chi-square tests, ANOVA and correlation coefficients.

Results

According to the results, the average age of the case group was 36.5 ± 8.3 years and of the control group was 27.3 ± 9.2 years ($P = 0.42$). 74.3% of the case group and 77.1% of the control group were married ($P = 0.42$). Average education duration of case group was 10.5 ± 4.2 years and of control group was 12.8 ± 2.2 years which showed a statistically significance difference ($P < 0.01$) (Table 1). The majority of employed people of both groups

had personal jobs. Previous attempt to commit suicide in the case group was significantly higher.

The mean duration of addiction in the case group was 10.8 ± 4.6 years but no significant association was found between the duration of addiction and suicide rate ($P = 0.94$). The most frequent substances that were used by the case group were opium (65.8%), heroin (27.2%) and a combination of heroin and hashish (7.2%). There was no difference between the suicide risk score, and depression score in those people who took heroin or opium ($P = 0.07$). Suicide risk score did not have a significant correlation with the number of addiction treatments of the case group ($P = 0.20$), the same as depression score ($P = 0.80$). Suicide risk score ($P = 0.30$) and depression severity ($P = 0.9$) had no statistically significant association with employment in both case and control groups.

Table 2 shows that score of the suicide risk in the case group had no significant relationship with previous suicide attempts but score of the depression in the case group showed a significant association. The suicide risk with moderate severity had the highest frequency (34%) in the case group and suicide risk with low severity gained the highest frequency (40%) in the control group. The depression rate with moderate severity had the highest frequency (25.7%) in the case group and depression risk with low severity gained the highest frequency (35.7%) in the control group. Table 3 compares the suicide score between the two groups in different depression severity. Due to the unreliability of the substance doze

Table 1. Demographic, suicide score, depression score and previous attempts to commit suicide in the case group compared with control group

	Case group	Control group	P-value
Age (years) (mean \pm SD)	36.5 ± 8.3	27.3 ± 9.2	0.40
Education (years) (mean \pm SD)	10.5 ± 4.2	12.8 ± 2.2	0.01
Unemployment (%)	17.1	8.6	0.03
Married (%)	74.3	77.1	0.40
Suicide attempts (%)	25.7	7.1	0.01
Suicide score (mean \pm SD)	392.3 ± 104.5	302.2 ± 68.2	< 0.01
Depression score (mean \pm SD)	27.5 ± 13.4	18.3 ± 10.0	< 0.01

Table 2. Correlation between suicide and depression scores with previous suicide attempts in case and control groups

	Previous suicide attempt		P-value	Previous suicide attempt		P-value
	In case group	In control group		In case group	In control group	
	Yes	No		Yes	No	
Average Suicide Score	355.8	404.9	0.09	438	291.8	0.01
Average Depression Score	20.9	29.8	0.01	408	16.6	0.01

Table 3. Comparison of suicide score with depression severity in case and control groups

Depression rate	Average suicide score In case group	Average suicide score In control group	P-value
Absence of depression (normal ups and downs)	279.0	256.0	
Mild mood disturbance	288.0	260.5	
Moderate depression	322.8	326.0	< 0.01
Severe depression	388.0	322.0	
Extreme depression	545.5	438.7	

information, it was not possible to assess the association between consumption rate and suicide risk.

Discussion

The prevalence of suicide in substance dependent people is about 15%.³ According to studies, one of the effective factors of increasing the risk of suicide in addicted people is mental disorders like depression, anxiety, and bipolar disorder. Addiction severity is associated with increased risk of suicide too. A higher level of suicide risk is reported in addicted patients who were under treatment with methadone.^{18,19}

In our study, due to unreliable information about the amount of substance-taking by patients, we were not able to assess the severity of addiction. It was found that most people who had committed suicide were unemployed and lived in boarding houses and suffered from psychiatric problems, alcoholism or physical illness.²⁰ In this study the mean scores of suicide was more in unemployed people than others.

It was shown that the onset of drug-taking in people who have attempted suicide were lower.¹⁰ The average age of committing suicide is said to be 43.6 years.¹³ In our study there was no significant association between age and suicide. In a study done in Germany on imprisoned people, drug-addicts were compared with those with no drug dependence, and it was found that addicts were not only at higher risk for consumption of other addictive substances, but also face suicide attacks, depression and personality disorder more than others.^{7,21}

However, in our study, only 7.2% of the case group took two simultaneous addictive substances (heroin and hashish). In a study that

was conducted among Minnesota residents, there were found no relationship between their addiction to tobacco and the patients' depression rates after hospital discharge and also their suicide rate.²²

In another study it was found that suicide attempts and negative moral assessment are important predictive factors for hospitalization of those people who had substance-taking and depression disorders simultaneously.²¹ Depression is considered as one of clinical symptoms of drug addiction.⁵

Generally, negative life events in people who commit suicide can have great impact on creating psychological disorders such as depression, hopelessness and anxiety. However, certain events such as relationship problems, physical and mental abuse, psychological problems related to childhood, severe psychological problems in the family and hospitalization in mental hospitals can play a major role.²³ The limitations of this study can be noted as selection of control group among the patients' companions which may somehow mask the effect of genetic factors and family environment.

Finally, it can be concluded that the risk of suicide and depression in drug addicts is more than normal population, and these two are closely linked to each other. Suicide risk in the case group did not have a significant association with age, education, marital status, substance type, duration of addiction, and previous addiction treatments. Severity of depression had also no significant relationship with age, education, occupation, and marital status.

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

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خودکشی در وابستگان به مواد مخدر افیونی

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چکیده

مقدمه: معضل اعتیاد یکی از چهار بحران جهانی است. این بیماران در مقابل اختلالات روانی آسیب پذیرتر می باشند. هدف از مطالعه حاضر، بررسی میزان خطر خودکشی در وابستگان به مواد مخدر افیونی بود.

روش‌ها: این مطالعه به صورت مقطعی انجام شد و نمونه مورد نظر از میان بیماران بستری که جهت ترک اعتیاد مراجعه کرده بودند و گروه شاهد نیز از بین همراهان مراجعین که وابستگی به مواد مخدر افیونی نداشتند، انتخاب شدند. جهت بررسی میزان خطر خودکشی، پرسش نامه تخمین خطر خودکشی California و جهت سنجش میزان افسردگی، پرسش نامه افسردگی Beck برای هر فرد تکمیل گردید.

یافته‌ها: در مقایسه بین میانگین تحصیلات ($P < 0/01$)، میزان بی کار بودن ($P = 0/03$) و اقدام قبلی به خودکشی ($P = 0/01$) در گروه هدف و شاهد، از نظر آماری تفاوت معنی داری مشاهده شد. نمره خطر خودکشی ($P < 0/01$) و نمره آزمون سنجش افسردگی ($P < 0/01$) به دست آمده در بین گروه هدف و شاهد از لحاظ آماری تفاوت معنی داری داشت. میانگین نمره در آزمون سنجش افسردگی در مقایسه با اقدام قبلی به خودکشی در گروه هدف معنی دار بود ($P = 0/01$). در گروه شاهد نمره خودکشی و نمره افسردگی هر دو با اقدام قبلی به خودکشی ارتباط معنی داری داشت ($P < 0/01$). میانگین نمره خودکشی بر اساس درجه افسردگی آن‌ها در دو گروه مقایسه گردید و مشخص شد که از لحاظ آماری تفاوت معنی داری وجود دارد ($P < 0/01$).

نتیجه گیری: خطر خودکشی و میزان افسردگی در معتادان به مواد مخدر بیش تر از افراد عادی جامعه است و این دو ارتباط تنگاتنگی با هم دارند.

واژگان کلیدی: خودکشی، افسردگی، مواد مخدر افیونی.

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