Original Research Article

Frequency of Psychiatric Disorders in Drug Addicts and Non-addicts: A Case-Control Study

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ABSTRACT

Introduction: Addiction (drug dependence) is a health problem in many countries. In Iran, drug addiction is one of the most important preventable health problems. Comorbidity of drug abuse with other disorders is a barrier to treatment of addicts, in a way that more than 70% of addicts suffer from mental and physical disorders. Therefore, we performed this comparative study to investigate the comorbidity of mental disorders in drug addicts and non-addicts referred to the addiction rehab center of 5th Azar Hospital in Gorgan, in 2016. **Materials and Methods:** The study was performed on 130 male drug addicts and 130 male healthy controls selected by available sampling. Structured interviews for drug dependence testing (based on the DSM-V-TR criteria) and the symptom checklist-90-Revised (SCL-90-R) were used to assess the mental status of the subjects. Data were analyzed in SPSS (version 16) using t-test, Mann-Whitney U test, Chi-square and Shapiro-Wilk tests. The significance level for all comparisons was set at $P < 0.05$. Validity and reliability of the material were assessed in a pilot study. **Results:** Drug addicts scored higher in all scales related to mental disorders compared with the control group. The frequency of symptoms including somatization (56.9%), obsessive-compulsive disorder (61.5%), interpersonal sensitivity (62.3%), depression (66.2%), anxiety (59.2%), hostility (42.3%), phobia (34.5%), paranoid ideation (62.6%), and psychoticism (56.9%) was higher in drug addicts. **Conclusion:** The results of this study indicate that the frequency of psychopathological symptoms and mental disorders is significantly higher in drug addicts compared with the normal population.

KEYWORDS: Mental disorders, Drug dependence, Comorbidity, Mental health

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INTRODUCTION

Drug addiction is a major public health problem [1]. This chronic and recurrent disorder has profound social, psychological, physical and economic impacts. In addition to its self-destructive effects, addiction imposes heavy costs on individuals, families and the community [2]. According to the World Health Organization's annual report in 2005, there are about 200 million opiate addicts worldwide, with the highest incidence rates in Iran (2.8%), Kazakhstan (2.3%) and Russia (2.1%) [3]. In Iran, drug abuse is one of the most important preventable health problems [2]. Epidemiologic findings suggest that there are approximately 2 million young addicts in Iran. On the other hand, hundreds are imprisoned because of issues related to addiction (including drug trade), which highlights the importance of studying different aspects of this problem [4]. Meanwhile, the multidimensionality of its etiology and comorbidity of drug addiction with other disorders are problematic barriers to the treatment of addicts. Previous findings suggest that more than 70% of addicts have problems related to substance abuse such as personality disorder, sexual dysfunction, anxiety, depression and physical disorders [3, 4]. Recent studies have shown the high prevalence of mental disorders in drug addicts [5, 6]. Comorbidity of addiction with mental disorders is of clinical importance, and influences the etiology, prognosis and vulnerability of this group of patients. Studies in the US has shown that disorders such as antisocial personality, phobias,

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anxiety disorders and major depressive disorder are mostly related to drug/substance abuse [5]. In 2016, Kruckow et al. reported that the incidence of mental disorders in addicts have increased since 1992 [7]. Bishal et al. demonstrated a significant relationship between drug abuse and severity of psychological symptoms [8]. Several studies have been conducted in Iran about mental disorders caused by drug abuse [2-4]. Yaghubi et al. reported the high prevalence of psychological disorders such as depression in drug addicts [4]. Another study also found the co-occurrence of addiction with personality disorders such as antisocial personality (75.2%), schizophrenia (56.4%), paranoid personality disorder (70.3%) and hypomania (54.5%) [2]. Despite the increase in the number of addicts in Iran during the past decade, limited number of studies have been performed on comorbidity of substance abuse with other mental disorders. Therefore, the aim of this study was to compare the comorbidity of mental disorders in drug addicts and non-addicts.

MATERIALS AND METHODS

This case-control study was performed on 130 male addicts who were referred to the addiction rehab center of the 5th Azar Hospital in Gorgan in 2016. Non-drug dependent controls were selected from the general population of the city. The two groups were matched in terms of social characteristics such as age, gender, education level, marital status and location of residence. Sampling was done using the method described by Heydari et al. [9]. Considering power of 90% (10% error type II) and 5% error type I (95% confidence interval), the sample size of each group was calculated as 130.

Necessary permissions were obtained from the Ethics Committee of Golestan University of Medical Sciences (code: 794/1395). Written consent was obtained from all subjects, and they were assured of confidentiality of their information at all stages of the study. Inclusion criteria were as follows: having upper secondary education, residence in Gorgan, and having all criteria of drug dependence based on the fourth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-V-TR) [12]. Subjects without the criteria of drug dependence were excluded from the study. After four months, completed questionnaires were collected and prepared for the next stages of the study. Control subjects completed the questionnaires in two stages and under supervision of a specialist. Comparison between the study groups was made after matching the questionnaires in terms of demographic variables. Structured interviews for drug abuse testing (based on the DSM-V-TR criteria) and the symptom checklist-90-Revised (SCL-90-R) were used to assess the mental status of the subjects. The SCL-90-R is a useful tool that assesses the nine symptoms of psychopathology including somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. Grading and interpretation of the results were based on the following three indices: global severity index (GSI), positive symptom total (PST), and positive symptom distress index (PSDI). Validity of the test has been reported in various countries including Iran [10].

Collected data were analyzed by SPSS software (version 16). Shapiro-Wilk test was used to check the normality of the data. Independent t-test and Mann-Whitney test were used for analysis of normally distributed data and non-normal data, respectively. Chi-square test was used to compare the two groups. The significance level for all comparisons was set at $P < 0.05$.

RESULTS

We studied the frequency of mental disorders among 130 drug addicts and 130 control subjects. The two groups were matched for age, gender, level of education, occupation and marital status. All subjects were male and the mean age of the two groups was 40.94 ± 11.81 years (age range: 16-72 years). Based on the results of the Shapiro-Wilk's test, age-related data were non-normalized (P=0.09).

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Table 1 shows the frequency of demographic characteristics of the subjects

Table 1. Frequency of some demographic characteristics of the participants

Level of Education				Marital status		Employment status	
Under diploma	Diploma	Associate Degree	Bachelor's Degree	Single	Married	Employed	Unemployed
126 (48.3%)	94 (35.7%)	29 (10.9%)	11 (4.2%)	85 (32.6%)	175 (67.4%)	110 (42.3%)	150 (57.7%)

Data analysis showed that the most commonly used substances were opioid (87.7%), crystal methamphetamine (42.3%), crack (23.8%), methadone (20.8%), cannabis (6.2%), tramadol (5.4%) and benzodiazepine (3.8%). As shown in Table 2, the frequency of mental disorders was higher in drug addicts.

Table 2. The prevalence of mental disorders in the two groups

		Somatization		Interpersonal sensitivity		Depression		Anxiety		Hostility		Phobia		Paranoia		Psychotic disorders	
Drug-dependent	Positive	P-value<0.001	55 (42.3%)	P-value<0.001	81 (62.3%)	P-value<0.001	86 (66.2%)	P-value<0.001	77 (59.2%)	P-value<0.001	55 (42.3%)	P-value<0.001	4 (34.5%)	P-value<0.001	90 (62.2%)	P-value<0.001	74 (56.9%)
	Negative		75 (57.7%)		49 (37.7%)		44 (33.8%)		53 (40.8%)		75 (57.7%)		85 (65.4%)		41 (30.8%)		56 (43.1%)
Non-dependent	Positive		19 (14.6%)		19 (14.6%)		10 (7.7%)		8 (9.2%)		8 (9.2%)		3 (2.3%)		28 (21.5%)		8 (6.2%)
	Negative		111 (85.4%)		111 (85.4%)		120 (92.3%)		118 (90.8%)		118 (90.8%)		127 (97.7%)		102 (78.5%)		122 (93.8%)

Considering the cut-off point of 1 for the GSI, subjects with grades higher than the cut-off were suspected of having mental disorders, while subjects with grades lower than the cut-off had no symptom of mental illness. In the present study, at least 63.8% of drug addicts and 6.2% of the controls were suspected of having mental disorders. Based on the results of the t-test, the mean of GSI, PSDI and PST differed significantly between the drug-dependent and non-dependent individuals (P-value <0.001).

DISCUSSION

The overall aim of this study was to investigate the comorbidity of mental disorders in drug-dependent and non-dependent subjects referred to addiction rehab center of 5th Azar Hospital in Gorgan, Iran. The mean scores of drug addicts in the SCL-90-R for all related mental disorders and all nine clinical indices were

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significantly higher than the control group. The prevalence of somatization (56.9%), obsessive-compulsive disorder (61.5%), interpersonal sensitivity (62.3%), depression (66.2%), anxiety (59.2%), hostility (42.3%), phobia (34.5%), paranoid ideation (62.6%) and psychoticism (56.9%) was higher among drug addicts. In study of Bishal et al., drug addicts scored 51.1 in the Kessler psychological distress scale [8]. Results of Parsania et al. showed that drug addicts have antisocial personality (75.2%), schizophrenia (56.4%), paranoid personality disorder (70.3%) and hypomania (54.5%) [2]. Study of Haghighi et al. on 170 psychiatric patients showed that the patients had psychotic disorders (61.8%), mood disorders (15.3%), and symptoms of cluster B personality disorders (3.5%) [3]. Study of Heydari et al. reported that the prevalence of psychotic disorders among drug addicts and the general population was 63.5% and 28.8%, respectively [9]. Study of Hosaini et al. showed that the prevalence of schizophrenia, other psychotic disorders, mood disorders and anxiety disorders was 28.7%, 6.7%, 9.8% and 7.9%, respectively [6]. In the present study, the prevalence of all mental disorders was significantly higher in the drug-dependent patients compared with the controls, which is consistent with the results of Yaghoubi et al., Heidari et al. and Tabatabaei et al. [4, 9, 11].

In the current study, at least 63.8% of drug addicts and 6.2% of the controls were suspected of having mental disorders. Heydari et al. found that 63.5% of drug addicts and 23.8% of healthy controls were suspected of having mental disorders [9].

Considering the high prevalence of mental disorders in Iran, increasing rate of depression and anxiety among teenagers, and the association of these phenomena with frequency of addiction and decline in social performance, it is suggested to pay special attention to promotion of all aspects of mental health in the community. Moreover, it is essential that officials and authorities in the anti-narcotics headquarters increase their efforts to eliminate the supply of illegal substances.

Our study was limited in terms of the number and geographical distribution of the study population. Hence, conducting studies using a larger study population could provide a more accurate finding.

CONCLUSION

The results of this study indicate that the frequency of mental disorders is significantly higher among drug addicts compared to the normal population. Considering the comorbidity of addiction with other mental disorders, it is recommended to consider the above finding in therapeutic measures, and use integrated therapies for treatment of drug addiction.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

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