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Original communication

Survey of factors related to criminal behavior in a sample of Iranian substance abusers

Omid Mehrpour, MD Forensic Med Specialist, Assistant Professor [a,b],
Parissa Karrari, MD Researcher [a,b],
Ardeshir Sheikhazadi, M.D. Forensic Medicine Specialist, Professor of Forensic Medicine [c,*]

[a] Medical Toxicology and Drug Abuse Research Group, Birjand University of Medical Sciences, Birjand, Iran
[b] Department of Clinical Toxicology and Forensic Medicine, Faculty of Medicine, Birjand University of Medical Sciences, Ghaffari Avenue, Birjand 97175-379, Iran
[c] Department of Forensic Medicine, School of Medicine, Tehran University of Medical Sciences, Poursina St., Keshavarz Blvd., Tehran, Iran

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ABSTRACT

Objectives: Many countries including Iran have a high rate of substance abuse. It is essential for public health and law enforcement strategies to know the causes and consequences of substance abuse and its relation to crimes.
Methods: In a prospective case–control study, covering a period of one year starting from March 21, 2010, 125 cases with criminal behavior and 125 cases with no history of criminal behavior were studied.
Results: Eight percent of our studied population had a previous history of psychological disorder. Most of our cases were cigarette users (78.4%). Forty-two cases had a history of alcohol abuse (16.8%). Modern drugs were the most common type of drugs (56%) being used. Multivariate analysis using logistic regression revealed that criminal behavior was correlated with divorce (RR = 5.35; 95% CI = 1.59–16.01; $P = 0.023$), history of alcohol use (RR = 2.63; 95% CI = 1.11–6.22; $P = 0.027$), history of psychological disorder (RR = 4.97; 95% CI = 1.44–17.20; $P = 0.011$), Modern drug use (RR = 4.86; 95% CI = 2.01–11.76; $P = 0.001$) and starting drug abuse at an early age (RR = 0.94; 95% CI = 0.88–0.99; $P = 0.03$).
Conclusions: Risk factors for criminal behavior among substance abusers include being divorced, history of alcohol abuse, history of psychological disorder, modern drug abuse and starting drug abuse at an early age.

1. Introduction

Substance abuse is one of the most important and preventable health hazards worldwide. Iran has a noticeable role in the transit of opium and other drugs from Afghanistan to western countries.[1–3] In western countries, alcohol, cannabis, methamphetamine and heroin are the most common drugs[4]; however in Iran, opium is the most used drug.[5]

Substance abuse is a multidimensional problem; substance abuse and crimes reflect a wide range of complex social and psychological reasons.[6]

Abuse alcohol and other drugs increases crimes directly through the use and sale of illicit drugs and indirectly through the effects of drugs on crimes associated with compulsive drug seeking. Moreover, some studies show a narcotic–crime relationship and suggest that evaluation of this relationship can help us to decrease psychological problems in substance abusers. Unfortunately, few studies have evaluated factors related to substances abusers who have criminal history in non-western countries. As such, the present study sought to fill this research gap by. employing a case–control design to identify factors increasing criminal behavior of substance abusers in the eastern region of Iran.

2. Materials & methods

Birjand University of Medical Sciences Review Board approved the ethical aspects of this prospective study concerning the relation between criminal behavior and substance abuse in Birjand, the capital of the Southern Khorasan province. This

* Corresponding author. Department of Forensic Medicine, Faculty of Medicine, Tehran University of Medical Sciences, Poursina St., Keshavarz Blvd., Tehran 1417613151, Iran. Tel.: +98 21 22126039, +98 912 2890395 (mobile); fax: +98 21 66405588.
E-mail addresses: ardeshirsheikhazadi@yahoo.com, sheikhazadi@tums.ac.ir (A. Sheikhazadi).

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study took one year, starting from March 21, 2010 to March 21, 2011. The province of Southern Khorasan is located in the eastern region of the country. The capital of that Province, Birjand, is an agricultural Province with an estimated population of approximately 636,640, with a low-income socioeconomic status representing the majority of the people. There are seven addiction treatment centers in Birjand. Three are public and the others are private (Naji, Shafa, Rahayee, Nedaye salamat). Samples were selected based on the time of referral to addiction treatment centers. Data was collected in a predesigned questionnaire, being completed by a research assistant who was blind to the outcome of the analysis, while he was the consultant of the clinics. Questionnaires documented demographic data, which included abuser's age, gender, marital status, occupation, education level, type of used drugs, route of use, and the onset of drug consumption.

In a case–control study, we studied 125 substance abusers admitted to clinics with a history of criminal behavior as the case group and after matching their gender and age, we chose 125 cases with no criminal behavior history as the control group. Criminal histories based on self-administrated questionnaires consisted of stealing, drug trafficking, illegal sexual relationship and disorderly conduct. Iran is an Islamic republic and sexual relationship outside the marriage is illegal and has severe penalties. In this study, illicit drugs are divided into three groups: traditional drugs (Opium, Shireh, or both); new drugs (Crystal with heroin base, alone or combined with other drugs); and other drugs such as Cannabis, Illegal Methadone, Tramadol, and Diphenoxilate. Data was coded and analyzed using SPSS version 16. The relationship between variables was examined using Chi-square and Logistic regression test.

3. Results

Between March 21, 2010 and March 21, 2011, 125 cases with criminal behavior and 125 cases with no history of criminal behaviors, totally 250 subjects (232 males and 18 females) were included in this study. Most of the cases were living in the urban areas (97.2%). Nearly two third of the cases were married ($n = 156$, 62.4%) followed by single ($n = 70$, 28%) and divorced ($n = 24$, 9.6%). Middle school education was the most common education level ($n = 100$, 40%), while just 8% of the cases had college education.

The self-employed represented the largest group (46.8%), followed by the unemployed (27.2%), the students (3%) and office workers (4.4%). Eight percent of the cases had a previous history of mental disorder. Most of the cases were cigarette user (78.4%). Forty-two cases had a history of alcohol abuse (16.8%). Modern drugs were the most commonly abused drugs (56%), followed by traditional drugs (37.6%) and other drugs which were minimally abused. Seventy-seven cases revealed more than a single administration route for drug abuse (30.8%). The most common route of drug abuse in our study was smoking ($n = 115$, 46%) followed by ingestion (20.4%). There was a significant difference between the case group and control group in terms of marital status ($P = 0.02$), occupation ($P = 0.01$), education level ($P = 0.02$), history of cigarette use ($P = 0.002$), history of alcohol abuse ($P = 0.002$), history of mental disorder, form and route of substance abuse ($P = 0.01$). However, there were no significant differences between the two groups in terms of place of residence (Table 1). Multivariate analysis by logistic regression revealed that criminal behavior was correlated with divorce (RR = 5.35; 95% CI = 1.59–16.01; $P = 0.023$); history of alcohol abuse (RR = 2.63; 95% CI = 1.11–6.22; $P = 0.027$); history of mental disorder (RR = 4.97; 95% CI = 1.44–17.20;

Table 1
Characteristics of case group and control group.

Items		With criminal history $N = 125$	No criminal history $N = 125$	Odds ratio	Confident interval	P-value
		Number (Percent)	Number (Percent)			
Education	Illiterate	6(4.8%)	7(5.6%)	3.43	0.73–16.09	$P = 0.028$
	Primary school	32(25.6)	33(26.4)	3.88	1.17–12.86	
	Middle school	59(47.2)	41(32.8)	5.76	1.79–18.47	
	Pre university	24(19.2)	28(22.4)	3.43	1.01–11.66	
	College education	4(3.2)	16(12.8%)	1	–	
Martial statue	Single	44(35.2)	26(20.8)	1	–	$P < 0.0001$
	Married	63(50.4)	93(74.4)	2.49	1.39–4.46	
	Divorced	18(14.4)	6(4.8)	4.43	1.67–11.77	
Occupation	Student	3(2.4)	5(4)	–	–	$P = 0.014$
	House wife	9(7.2)	9(7.2)	–	–	
	Self employee	53(42.4)	64(51.2)	–	–	
	Worker	16(12.8)	12(9.6)	–	–	
	Office Employee	1(0.8)	10(8)	–	–	
	Unemployment	43(34.4)	25(20)	1.91	1.12–3.24	
Smoking history	With smoking history	108(86.4)	88(70.4)	2.67	1.41–5.06	$P = 0.002$
	Without smoking history	17(13.6)	37(29.6)	1	–	
Alcohol use history	With Alcohol history	30(24)	12(9.6)	2.97	1.44–6.13	$P = 0.002$
	Without Alcohol history	95(76)	113(90.4)	1	–	
	Total	125(100)	125(100)			
Form of substance use	Traditional drugs	26(20.8)	68(54.4)	1	–	$P < 0.0001$
	Modern Drugs	92(73.6)	48(38.4)	5.01	2.83–8.87	
	Other drugs	7(5.6)	9(7.2)	2.03	0.69–6.03	
Route of abuse	Smoking	66(52.8)	49(39.2)	1	–	$P = 0.010$
	Ingestion	15(12)	36(28.8)	0.31	0.15–0.63	
	Intra venous	4(3.2)	3(2.4)	0.99	0.21–4.63	
	Combination of two or more route	40(32)	37(29.6)	0.8	0.45–1.43	
Place of residence	Urban	122(97.6)	121(96.8)	1.34	0.29–6.13	$P = 1.000$
	Rural	3(2.4)	4(3.2)	1	–	
Previous history of Mental disorder	With history	15(12)	5(4)	27/3	1.15–9.30	$P = 0.02$
	Without history	110(88)	120(96)	1	–	
Mean age		33.46 ± 9.83	34.52 ± 8.85			$P = 0.3$
Mean age of beginning substance use		0.464 ± 19.13	0.7.29 ± 22.49	0.90	0.86–0.95	$P < 0.0001$