

Pattern of Substance Abuse and Prevalence of Risk Factors of HIV and Hepatitis among Addicted Women in Western Iran

Abstract

Background: Women are the first victims in most of social damages and corruptions. However, due to some social and cultural reasons, the most of the drug addiction studies in Iran target male population. Hence, this study aimed to investigate the pattern of substance abuse and prevalence of HIV and hepatitis risk factors among addicted women. **Methods:** This is a cross-sectional study conducted on women referred to methadone maintenance treatment centers of Western Iran (Kermanshah province). Data were collected through interview by a psychologist who is working full time in the centers. **Results:** A total of 138 addicted women were studied. Among whom, 50 individuals were aged >45 years old (36.2%), 135 individuals (97.8%) had a history of substance abuse in their family, and 66 individuals (40.5%) initiated drug use before age 20. The most common substances were opium and crack with a proportion of 76.8% and 9.4%, respectively. Prevalence of positive HIV and hepatitis B among addicted women were 18.8% (26 persons) and 5.0% (7persons), respectively. Three (2.1%) of addicted women with HIV also had HBV. The most commonly HIV transmission were drug injections (30.7%) and unprotected sex (11.5%). **Conclusions:** Although women do not constitute a significant part of substance abuse, increasing trend of women addiction, on one hand, and high prevalence of risk factors related to HIV or hepatitis in women, on the other hand; show that officials and experts are required to seriously consider prevention and harm reduction programs for women.

Keywords: Addicted women, addictive, behavior, methadone maintenance treatment, methadone, substance abuse, substance-related disorders

Introduction

Among Iranian society, drug abuse and addiction are factors that influence individuals' physical, psychological, and social health status.^[1] Although the significant progress has been made in understanding these disorders and finding the most appropriate way for their prevention and treatment, substance abuse is still considered predominantly as a male phenomenon. Hence, research on women, in this regard, has been neglected.^[2] Despite the fact that substance abuse is more common in men than women, its medical, social, and economic consequences are more severe among women.^[3] In fact, initiation of drug use in women occurs in older ages compared to men. For example, women initiate alcohol and marijuana about 1–2 years later than men but begin using cocaine 1 year earlier in the course of their addiction.^[4]

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To provide better understanding from such growing social and public health problem, there is a need to study the pattern of drug abuse in addicted women in further details. In fact, Kermanshah province is one of the hot spots in Iran for HIV/AIDS and substance abuse. The present research was carried out to investigate drug use pattern and prevalence of HIV and hepatitis risk factors among addicted women referred to methadone maintenance treatment (MMT) centers in Kermanshah province.

Methods

The study population

This study is a cross-sectional study on addicted women referred to MMT centers in Kermanshah province in 2015. This province is located in the western region of Iran and consists of 14 districts. There are 95 active MMT centers in Kermanshah; all of participant's records were included in the study for the year 2014. According to the Ministry of Health and Medical

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Education, such centers provide the same care and services. In our study, an addicted woman was a person who uses substance for more than 6 months. A total of 138 addicted women were selected. The required data were collected through interview by psychologists who are working as full-time staff in the centers. Data including reason for drug withdrawal, type of abused substance, average amount of drug use, average cost of drug use per month, method of drug use, and history of addiction among families and friends were collected. The classification and categorization of the variables studied were based on World Drug Report.^[5] Drug use initiation age refers to individual's age at first-initiated drug. Based on the previous studies, we used wealth index as proxy for economic status.^[6] Drug use initiation has numerous reasons; the most significant one that leads one toward using drug is considered as the cause of drug use initiation. The main inclusion criteria were treatment with methadone at least 1 year.

Statistical analysis

To compare the means *t*-test and for frequencies of variables chi-square were used. Data were analyzed by Stata software (version 14.1) (Stata Corp, College Station, TX, USA). $P < 0.05$ was considered statistically significant.

Results

A total of 138 addicted women were studied among whom 50 individuals had + 45 years old (36.2%). The mean age of addicted women was 40.1 (SD: 11.7) years (range between 18 and 69 years). Ninety-eight (71.10%) of women were married, 100 (72.5%) were in a good socioeconomic status, and 66 (47.9%) had <5 years of education [Table 1].

Substance abuse pattern among addicted women in Kermanshah showed that 66 individuals (40.5%) initiated drug use before age 20 (early onset). The most common substances were opium and crack used by 106 (76.8%) and 13 (9.4%) individuals, respectively. The most prevalent methods of drug use were smoking (66.7%) and swallowing (27.5%), respectively. The majority of women (97.8%) had a history of substance abuse in their family [Table 2].

Prevalence of positive HIV and hepatitis B among addicted women were 18.8% (26 persons) and 5.0% (7 persons), respectively. Three (2.1%) of addicted women with HIV also had HBV. The most common HIV transmissions occurred through IV drug injections 30.7% (8 person) and unprotected sex 11.5% (3 persons), and the HIV transmission in other cases was unclear.

As indicated in Figure 1, the prevalence of unprotected sex, prison history, and drug overdose were the most common risk factors among women, respectively. In general, 18.84%, 21.74%, and 10.21% of addicted women were identified with 1, 2, and more than 3 risk factors, respectively.

Discussion

Although women do not constitute a significant part of drug abusers considering increasing trend of women addiction, it can be predicted that over the coming years, women make up a large number of drug users in the country. Among drug addicts, role of women, both as drug users and as a population at risk, is undeniable. However, unfortunately, not only studies but also prevention and treatment methods are often male dominated and there is almost no specialized service for female drug users.

Opium and its derivatives with a proportion of 75% were the most common substances among our individuals which is consistent with similar studies in Iran.^[7] While in developed countries such as Italy, more of the studies conducted on addiction showed that intoxication by alcohol and synthetic drugs make up a considerable rate of addiction.^[8,9] Usually, small towns have limited access to synthetic drugs. Drug Control Headquarters announced that opium is the most

Table 1: Demographic characteristics of addicted women studied in Kermanshah province in 2014

Variable	Frequency (%)
Age	
18-24	16 (11.6)
25-45	72 (52.2)
>45	50 (36.2)
Marital status	
Married	98 (71.0)
Single	13 (9.4)
Divorced	27 (19.6)
Socioeconomic status	
Good	100 (72.5)
Medium	35 (25.4)
Poor	3 (2.2)
Level of education (year)	
Illiterate	31 (22.5)
1-5	35 (25.4)
6-9	36 (26.1)
10-12	29 (21.0)
>13	7 (5.1)

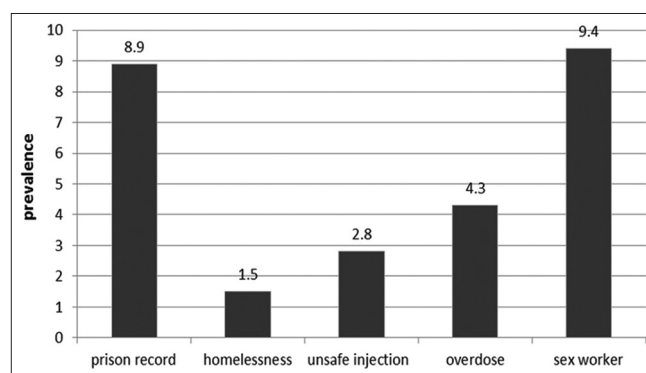


Figure 1: Prevalence of the most common risk factors among prostitution addicted women

Table 2: Drug use pattern among addicted women based on age at first initiated drug in Kermanshah province in 2014

Variable	Total, n (%)	Age at first initiated drug		P
		<20, n (%)	≥20, n (%)	
Type of drug				
Opium	106 (76.8)	40 (37.7)	66 (62.3)	0.38
Alcohol	6 (4.3)	3 (50.0)	3 (50.0)	
Methadone	8 (5.8)	4 (5.0)	4 (50.0)	
Crack	13 (9.4)	8 (61.5)	5 (38.5)	
Hallucinogenic substances	5 (3.7)	1 (20.0)	4 (80.0)	
Average use per month (days)				
1-10	99 (71.7)	41 (41.4)	58 (58.6)	0.91
10-20	27 (19.6)	10 (37.1)	17 (62.9)	
>20	12 (8.7)	5 (41.6)	7 (58.4)	
Average drug cost per month (\$)				
>5	92 (66.7)	37 (40.2)	55 (59.8)	0.98
5-10	20 (14.5)	8 (40.0)	12 (60.0)	
>10	26 (18.8)	11 (42.3)	15 (57.7)	
Method of drug use				
Swallowing	38 (27.5)	14 (36.8)	24 (63.2)	0.03
Snorting	3 (2.2)	2 (66.7)	1 (33.3)	
Smoking	92 (66.7)	35 (38)	57 (62)	
Injecting	5 (3.6)	5 (100)	-	
Family history of drug use				
No	3 (2.2)	3 (100)	-	0.06
Yes	135 (97.8)	53 (39.3)	82 (60.7)	
Causes of drug use initiation				
Ecstasy	56 (40.6)	24 (42.9)	32 (57.1)	0.57
Availability and curiosity	17 (12.3)	95 (51.8)	8 (48.2)	
Addicted family or friend	34 (24.6)	12 (35.3)	22 (64.7)	
Treatment	31 (22.5)	11 (35.5)	20 (64.5)	

common drug used by women in Iran which is in line with the current research findings.

Approximately two-thirds of the surveyed women had <5 years of education that is consistent with previous studies conducted in Iran.^[10] The prevalence of addiction among educated women is much lower than other groups. Proportions of people with academic education can be attributed to lower number of these people in the society. By the way, the role of education as a drug addiction cannot be denied. Nearly one-fourth protective factor for prevention of addicted women stated having an addicted family or friend as the main cause of their addiction to drug which was consistent with similar studies in other parts of the world.^[11-13] More involvement of women in addiction can be prevented by taking appropriate control

measures in the family with addicted father or spouse. On the other hand, addicted women usually an addicted spouse or partner who not only does not support the woman but also commit violence against them or leaved the relationship. Studies have shown that drug use in women can lead to lots of societal abnormalities such as running away from home and risky sexual relationship.^[14] In this study, the prevalence of unsafe sex among addicted women was nearly 10%; it is much less compared with studies conducted in the Western countries.^[15,16] However, in Iran, there are no accurate statistics of unsafe sex among women.

In this study, 8.9% of addicted women had prison history which is three times more than the proportion of female prison population among total Iranian prison population^[18] and almost double in the Western countries.^[19] AIDS is more common among prisoners than the general population and also positive HIV is more among women in prison than men.^[20,21]

We found that about 2.8% of women had unsafe injection which is a major way for transmission of HIV and hepatitis; in such cases. Injecting drug users usually belong to groups or networks that use shared injecting equipment. Especially in prisons, HIV can be spread very quickly since access to injecting equipment is not easy for the prisoners.^[22,23] In similar studies that have been conducted on men in Iran and the rest of the world, the most important factor to HIV infection is the use of shared and unhygienic needles.^[24-26]

More than 40% of women initiated using drug before age 20. Similar studies in Iran indicated that between 15% and 30% of addicted women began using drugs before age 20. In general, drug addiction is most prevalent among those aged between 20 and 30. Comparison between drug use initiation ages of men and women is suggestive of a slight difference. Given that individuals aged <20 years still have maintained their dependence on family.^[27]

Conclusions

Although prevalence of drug use among women in Iran is less than men, it should be noted that women addiction is regarded more abnormal than men addiction, and prevalence of risk factors related to HIV and hepatitis among addicted women is very high. High prevalence of risk factors and low drug use initiation age greatly increase the likelihood of transmission of communicable diseases such as HIV and hepatitis so that the most significant ways of HIV transmission in Iran are injecting drug and sexual relationship, respectively. Hence, ongoing studies and monitoring the behavior of drug users besides promoting the behavior of not using drug and paving the way for quitting drugs are among effective measures that can improve social health status.

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Conflicts of interest

There are no conflicts of interest.

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References

- Eivazi M, Shirzadifar M, Mirshekarzadeh N. Comparison of periodontal manifestations in amphetamine and opioids' consumers. *J Kermanshah Univ Med Sci* 2016;19:383-9.
- Wetherington CL, Roman AB. *Drug Addiction Research and the Health of Women*. Vol. 2. DIANE Publishing; 1999.
- Cox S, Johnson CH, Meikle S, Jamieson DJ, Posner SF. Trends in rates of hospitalization with a diagnosis of substance abuse among reproductive-age women, 1998 to 2003. *Womens Health Issues* 2007;17:75-83.
- Haas AL, Peters RH. Development of substance abuse problems among drug-involved offenders. Evidence for the telescoping effect. *J Subst Abuse* 2000;12:241-53.
- World Health Organization. *World Drug Report*. New York: United Nations Offices on Drugs and Crime (UNODC); 2012.
- Rutstein SO, Johnson K, Measure OM. *The DHS wealth index*. ORC Macro, MEASURE DHS; 2004.
- Ahmadi J, Pridmore S, Alimi A, Cheraghi A, Arad A, Parsaeyan H, *et al.* Epidemiology of opium use in the general population. *Am J Drug Alcohol Abuse* 2007;33:483-91.
- Brown TG, Topp J, Ross D. Rationales, obstacles and strategies for local outcome monitoring systems in substance abuse treatment settings. *J Subst Abuse Treat* 2003;24:31-42.
- Suligo B, Magliochetti N, Nicoletti G, Pezzotti P, Rezza G. Trends in HIV prevalence among drug-users attending public drug-treatment centres in Italy: 1990-2000. *J Med Virol* 2004;73:1-6.
- Manesh MJ, Soleimanifar P, Hosseini F. Personal, familial, social and economical characteristics of jailed addicted women. *Iran J Nurs* 2005;17:47-54.
- Brady TM, Ashley OS. *Women in Substance Abuse Treatment: Results from the Alcohol and Drug Services Study (ADSS)* Citeseer; 2005.
- Jennison KM, Johnson KA. Parental alcoholism as a risk factor for DSM-IV-defined alcohol abuse and dependence in American women: The protective benefits of dyadic cohesion in marital communication. *Am J Drug Alcohol Abuse* 2001; 27:349-74.
- Jessup M. Addiction in women: Prevalence, profiles, and meaning. *J Obstet Gynecol Neonatal Nurs* 1997;26:449-58.
- RAHIMI MA. A review on the prevalence and the patterns of drug abuse in women in Iran. *J Sociol Welf* 2004;3:203-26.
- Elifson KW, Klein H, Sterk CE. Predictors of unsafe sex among at-risk heterosexual women. *Womens Health Urban Life* 2010;9:80-106.
- Chersich MF, Luchters SM, Malonza IM, Mwarogo P, King'ola N, Temmerman M, *et al.* Heavy episodic drinking among Kenyan female sex workers is associated with unsafe sex, sexual violence and sexually transmitted infections. *Int J STD AIDS* 2007;18:764-9.
- Rezaei Z, Zarei F, Firoozi E, Ahmadi D. Pattern of illegal drug use in women referred to substance abuse control clinic in Fasa, Iran (2009-2011). *J Fasa University of Med Sci* 2014;3:305-11.
- World Prison Brief; 2017. Available from: <http://www.prisonstudies.org/country/iran>. [Last accessed on 2017 Feb 05].
- McClelland GM, Teplin LA, Abram KM, Jacobs N. HIV and AIDS risk behaviors among female jail detainees: Implications for public health policy. *Am J Public Health* 2002;92:818-25.
- Hammett T, Widom R, Epstein J. *Update: HIV/AIDS and STDs in Correctional Facilities*. Washington DC: Office of Justice Programs, National Institute of Justice/Dept of Health and Human Services. Public Health Service, Centers for Disease Control and Prevention. 1995.
- Maruschak L. *HIV in Prisons and Jails, 1999: Bureau of Justice Statistics Bulletin*. Washington, DC: Bureau of Justice Statistics; 1997.
- Kaffashian A, Nokhodian Z, Kassaian N, Babak A, Yaran M, Shoaeei P, *et al.* The experience of hepatitis C screening among prison inmates with drug injection history. *J Isfahan Med Sch* 2011;28:1-7.
- Zamani S, Ichikawa S, Nassirimanesh B, Vazirian M, Ichikawa K, Gouya MM, *et al.* Prevalence and correlates of hepatitis C virus infection among injecting drug users in Tehran. *Int J Drug Policy* 2007;18:359-63.
- Panda S, Chatterjee A, Bhattacharjee S, Ray B, Saha MK, Bhattacharya SK, *et al.* HIV, hepatitis B and sexual practices in the street-recruited injecting drug users of Calcutta: Risk perception versus observed risks. *Int J STD AIDS* 1998;9:214-8.
- Power KG, Markova I, Rowlands A, McKee KJ, Anslow PJ, Kilfedder C, *et al.* Intravenous drug use and HIV transmission amongst inmates in Scottish prisons. *Br J Addict* 1992;87:35-45.
- Saelim A, Geater A, Chongsuvivatwong V, Rodkla A, Bechtel GA. Needle sharing and high-risk sexual behaviors among IV drug users in Southern Thailand. *AIDS Patient Care STDS* 1998;12:707-13.
- Skinner ML, Fleming CB, Haggerty KP, Catalano RF. Sex risk behavior among adolescent and young adult children of opiate addicts: Outcomes from the focus on families prevention trial and an examination of childhood and concurrent predictors of sex risk behavior. *Prev Sci* 2014;15 Suppl 1:S70-7.