Characteristics of Iranian Women Seeking Drug Treatment

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Abstract

Background: In the west, men are twice as likely as women to develop a drug problem, but female users have higher rates of morbidity than male users. Iran has the world highest per capita opiate consumption, but little is known about female drug users. In 2007, we established a free methadone clinic with ancillary services for female drug users in South Tehran. The aim was to explore the characteristics of female drug users seeking treatment for heroin dependence in Iran. Clients were interviewed about demographic characteristics, drug use and treatment history, and drug-related health problems. Urine and blood samples were collected and tested for morphine, HIV, hepatitis C virus (HCV) and sexually transmitted infections (STIs).

Methods: Between August 2007 and October 2008, 78 women completed a baseline interview. The median age was 37 years, the main ethnic background was Persian (65%), and half of the clients were married. Opium and heroin and opium use was reported by 69% (n = 54) and 87% (n = 68) of clients, respectively. The mean duration of heroin use problems was 10.5 years, and only 20% of women reported ever having received drug treatment. HIV and HCV seroprevalence was 5% and 24%, respectively. Forty percent were sexually active when interviewed, and one third tested positive for an STI. Women had poor social functioning, high levels of depression, and poor general health.

Results and Conclusions: Our clients were dependent users with a multitude of problems who had little or no contact with treatment agencies before this study. Many clients had made a transition from using opium to using heroin, and some had commenced injecting, placing them at risk for HIV and HCV infection. More women-only drug treatment services are needed to facilitate women’s entry into drug treatment.

Introduction

Drug dependence causes a significant public health burden through a range of mechanisms, including psychiatric comorbidity, crime, and such risky behaviors as sexual activity and poor health. Among heroin users, drug dependence has been associated with high levels of morbidity and mortality. Globally, men were twice as likely to develop a drug abuse problem as women, but female users had higher rates of morbidity than male users. Female users experienced more unemployment, depression and anxiety disorders, and more severe medical problems than male users. Iranian women were found to experience stigmatization from being drug users and were reluctant to seek treatment. As a consequence, very little information on female drug users in Iran exists.

Iran has the highest per capita opiate consumption in the world, with approximately 1.1 million severely dependent users according to a 1998 census. Of these, between 140,000 and 200,000 were injecting drug users (IDUs). As with drug use in most parts of the world, women were in the minority, yet some 8% of Iranian drug users were women, and 3% of Iranian IDUs were women. The majority of AIDS cases (62%) in Iran have occurred among IDUs. HIV among Iranian IDUs ranged from 15% to 23% in the community and from 12% to 63% in prison. Hepatitis C was almost universally high among IDUs, and Iran was no exception, with 60% of imprisoned IDUs infected. The prevalence of HIV and hepatitis C virus (HCV) among Iranian female drug users was unknown owing to the difficulties in recruiting this heavily stigmatized group into treatment or research.

Iran adopted the policy of harm reduction in 2002 and introduced many initiatives to reduce HIV transmission among drug injectors. Large-scale methadone and needle and syringe programs operate in the community and in prison in Iran. The vast majority of services and research targeted male
IDUs. For interventions to be effective, they need to address the target population’s specific risk factors. With this premise in mind, and based on previous experience in an outreach setting, several researchers and clinicians from the University of New South Wales in Australia established a public clinic for female drug users in South Tehran in 2007 in collaboration with the Iranian National Centre for Addiction Studies and the nongovernmental organization (NGO) Persepolis.

Materials and Methods

The aim of the study was to explore the characteristics of female drug users seeking treatment for heroin dependence in Iran. A secondary aim was to investigate the needs of female drug users seeking treatment.

The women’s clinic

A clinic was established to provide free methadone maintenance treatment (MMT) to women with a history of drug use in Tehran. In addition to methadone, clinic services included sexual healthcare, a needle and syringe program, primary healthcare, counseling, employment training, legal aid, and a women’s room. Information about the clinic was sent to welfare agencies, police stations, and prisons to aid in the recruitment of women. Eligibility criteria for methadone treatment were (1) being older than 18 years, (2) being opiate dependent, based on the World Health Organization’s (WHO) International Classification of Diseases (ICD-10), (3) providing a urine sample positive for opiates, and (4) having no medical contraindication.

Measures

Women who came to the clinic were asked to complete a registration form. After a few weeks, women were invited to be interviewed about their demographic characteristics, lifetime drug use and treatment history, and drug-related health problems during the month before starting MMT in the clinic. The Opiate Treatment Index (OTI) covered drug use, HIV and HCV risk behavior (injecting and sexual practices), physical health, social functioning, and criminal behaviors. Diagnoses of current heroin dependence and depression were obtained using ICD-10 and the Beck Depression Inventory (BDI). We administered the ICD-10 drug dependence section, specifically asking subjects to answer in relation to their use of heroin, opium, or other opioids. The General Health Questionnaire (GHQ) was also administered to corroborate psychiatric distress. Two female researchers were trained to administer the baseline interviews, which were piloted and modified. Interviews took between 90 and 120 minutes to complete.

Supervised urine samples were collected and tested for the presence of morphine (Acon Company test kit). Women were offered screening and treatment for sexually transmitted infections (STIs). They were also offered voluntary counseling and testing for HIV and HCV infection. Screening for HIV and HCV was performed with enzyme-linked immunosorbent assay (ELISA) rapid tests on fingerprick blood samples (Acon and Intec test kits). The Research and Ethic Committee at the Iranian National Center for Addiction Study and Tehran University of Medical Sciences and The Human Research Ethics Committee of the University of New South Wales, Australia, approved the research (HREC 07065). Informed consent was obtained at enrolment, and clients received US$5 compensation for their time and inconvenience.

Analysis

All analyses were carried out using SPSS (version 18). Descriptive statistics were reported as frequency and means with standard deviations (SD) and ranges. Participants were classified as being either criminally active or not in the month before MMT, according to whether they scored >0 on any of the measures comprising the crime score. Analysis of variance (ANOVA) was used to compare the ICD-10 dependence scores between people who were and were not criminally active. Participants were also categorized by age, with those >median age (37 years) forming the older category and those under the median age forming the younger category. The two age categories were compared on baseline psychosocial and drug use scores using a one-way ANOVA.

Results

Demographic and drug use characteristics

Between August 2007 and October 2008, 97 women registered at the clinic, and 78 women (80%) completed a baseline interview. The median age was 37 years (range 16–61, n = 78). The women’s main ethnic backgrounds were Persian (65%), Azeri (17%), and Balouch (15%). The majority of Persian and Balouch women were ≤40 years (76% and 55%, respectively), and the vast majority of Azeri women was >40 years (62%). Just over half of the clients were married (51%), in either their first (41%) or second (10%) marriage. A further 4% of the women were in a temporary marriage, which is a short-term marriage found only in Shi’a Islam. The rest were widowed (18%), divorced (14%), separated (9%), or single (8%). Those in a temporary marriage were mostly in the younger group (67%). Literacy levels were moderately high, with 78% of clients being able to read and write, although 15% of clients had received no schooling. In the month before MMT, clients were engaged in home duties (53%), unemployed (25%), or working (19%).

Typically, clients first used alcohol, cannabis, opium, and then heroin and stimulants. A history of opium and heroin and opium use was reported by 69% (n = 54) and 87% (n = 68) of clients, respectively, with initiation occurring at a mean age of 25 years and 28 years (SD 9.51, range 9–48, 9–56 years old), respectively. Clients’ initial use of heroin or opium occurred with their partner (44%), a friend (36%), alone (14%), or with another (6%). Fifty-three percent of women had a drug-using partner, and 33% had a nondrug-using partner. Approximately 6% of women had no children, 78.4% had three or less children, and 15.6% had four or more children; the maximum number of children was 8. The vast majority of clients smoked cigarettes (79%). Clients’ use of a range of drugs and their mean age of first use are shown in Table 1.

Older clients experienced significantly more days of drug-related problems during the month before MMT (19.04 days, SD 13.05) than younger clients (7.6 days, SD 11.49; F1,73 = 13.92, p < 0.0001). Older clients also scored...
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Table 1. Drugs Ever Used by Clients and Mean Age at First Use

<table>
<thead>
<tr>
<th>Drug</th>
<th>% Ever used</th>
<th>Mean age first use (years)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcohol</td>
<td>12</td>
<td>21</td>
</tr>
<tr>
<td>Cannabis</td>
<td>12</td>
<td>23</td>
</tr>
<tr>
<td>Opium</td>
<td>69</td>
<td>25</td>
</tr>
<tr>
<td>Heroin</td>
<td>87</td>
<td>28</td>
</tr>
<tr>
<td>Stimulants</td>
<td>27</td>
<td>32</td>
</tr>
</tbody>
</table>

significantly lower on the total score for the GHQ (7.38, SD 6.45) than younger clients (10.68, SD 7.36; F1,75 = 4.01, p = 0.049). Old and young clients did not differ significantly in any other baseline psychosocial measures; including ICD-10 drug dependence scores, crime scores, BDI scores, and social functioning scores.

Approximately half of the clients (49%, n = 38) reported being current heroin users at the start of MMT, and most of these reported smoking heroin (89%) rather than injecting it (7%). Although our urinalysis study was incomplete, with only one third consenting (n = 28), 32% tested positive for heroin at baseline interview. Only 4 clients (5%) reported having ever experienced a drug overdose (n = 78).

Dependence diagnoses

Clients scored an average of 6.94 (SD 2.98, range 0–9) on the ICD-10 for the month before interview, where a score > 3 is classed as a dependence diagnosis. The mean duration of heroin use problems was 10.5 years (SD 9.9, range 0–40) (Table 2). Only 20% of women reported having ever had any form of treatment for their drug use. Clients reported having a drug-related problem on an average of 17.4 days in the month before they commenced MMT (SD 13.62, range 0–30, n = 76). They rated the severity of these drug-related problems at a mean of 3.42 out of 4 (SD 0.95, range 0–4, n = 78).

Criminal activity and imprisonment

The average crime score in the month before MMT was 2.57 (SD 3.71, range 0–20, n = 43). A few clients reported dealing drugs (10%), committing a violent crime (13%), or committing a property crime (1%). About half of the clients (44%) had been imprisoned, ranging from one to nine times. A few clients (6.4%, n = 4) reported using heroin while in prison. Women who were currently criminally active at baseline interview scored significantly higher ICD-10 opiate dependence than women who were not criminally active (8.47, SD 0.83, range 6–9, n = 15 vs. 6.58, SD 3.2, range 0–9, n = 63; ANOVA F1,76 = 5.04, p = 0.02).

HIV and HCV prevalence and risk behavior

At baseline, the prevalence of HIV and HCV was 5% and 24%, respectively. Approximately 12% of clients reported a history of drug injection and had their first injection at a mean age of 27.3 years (SD 7.46, range 14–38). On average, clients had been injecting for 1.6 years (SD 0.81, range 0.5–3 years). One woman reported injecting two or three times a day in the month before enrolling in MMT. None of the clients reported ever using shared needles and syringes for drug use. Almost one third (31%, n = 24) of clients had a tattoo, but few clients reported sharing the tattoo needle (3%). One fifth (21%, n = 16) of the women had piercings, but only 1 woman reported sharing a tattoo needle.

Being sexually active in the month before MMT was reported by 40% of clients, with the vast majority (96%, n = 32) having one partner only. Most clients (70%) never used condoms with their regular partner, although a fifth always used a condom (21%) and the rest reported occasional condom use (9%). Few women (9%, n = 7) reported ever having sex in return for money, gifts, or drugs. Most women had not engaged in anal sex (96%) in the month before MMT. The mean HIV risk behavior score in the month before MMT, based on the OTI questionnaire, was 4.44 (SD 5.61, range 0–18, n = 43). About half of the clients (53%, n = 41) reported having had sex while intoxicated with alcohol or drugs. One third of clients (33.3%) tested positive for an STI.

Social functioning, depression, and general health

Clients’ mean score on the social functioning scale of the OTI was 22.2 (SD 6.7, range 11–36, n = 43), 2 points higher than the mean score in the study that developed the OTI, with higher scores meaning poorer social functioning. The mean score on the BDI was 29.94 (SD 13.94, range 6–60, n = 78), which was in the moderate depression range according to the BDI. Of the 78 study participants, 18% (n = 14) scored in the mild depression range (≤15), 38% (n = 30) scored in the moderate depression range (15–30), and the largest group in our sample (44%, n = 34) scored in the severe range for depression (≥30). Women with mild or moderate depression were seen by our doctor, and those with major depression were referred to a psychiatric hospital.

Clients’ mean scores on the GHQ were highest for depression at 2.47 (SD 2.5, range 0–7) and anxiety at 2.43 (SD ...
Table 3. General Health Questionnaire Results

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean score</th>
<th>SD and range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Somatic symptoms</td>
<td>1.71</td>
<td>1.88 0–7</td>
</tr>
<tr>
<td>Anxiety</td>
<td>2.43</td>
<td>1.96 0–7</td>
</tr>
<tr>
<td>Social dysfunction</td>
<td>2.07</td>
<td>2.24 0–7</td>
</tr>
<tr>
<td>Depression</td>
<td>2.47</td>
<td>2.52 0–7</td>
</tr>
<tr>
<td>Total</td>
<td>8.38</td>
<td>6.87 0–27</td>
</tr>
</tbody>
</table>

1.96, range 0–7). Exactly half of the clients had total scores >4, indicating probable distress (Table 3).

Discussion

Our study of Iranian women seeking treatment for opiate dependence provided the first profile of female drug users in Iran. Clients were dependent users with a multitude of problems who had little or no contact with treatment agencies before this study. Many clients had made a transition from using opium to using heroin, and some had commenced injecting, placing them at risk for HIV and HCV infection. In comparison to other studies of women in drug treatment, our clients were older but had less exposure to drug treatment. This could be because Iranian women suffer from a greater stigmatization than female drug users in the west and, thus, were reluctant to enter treatment. Alternatively, it may be that Iranian treatment services were insufficiently tailored to women’s needs. Stigma and lack of support for women drug users in Iran led to an overwhelmingly male predominance in drug treatment services and in research, which may explain why it was uncomfortable for women drug users to seek these services. Others have called for gender-specific treatment services because of the greater severity of drug and employment problems of heroin-using women. Given that many women at our clinic were introduced to drugs by their drug-using partners; there may be a role for couple counselling, as women were unlikely to recover while their partners continued to use drugs. Traditional services could educate male drug users to refrain from initiating their partners into drug use.

Imprisonment was a common occurrence for our clients, albeit few clients reported drug use in that setting. Although few women reported being engaged in criminal activities, those who did were more drug dependent than those who did not. These two characteristics of the sample suggest that prison provides an ideal opportunity to commence methadone treatment for women, and prison-based drug treatment can reduce drug use after release from prison. Given that the Iranian Prison Organisation operated a methadone program for 18.5% of male prisoners but only 4% of female prisoners, there was an opportunity to increase methadone coverage for female prisoners in Iran. This will reduce the risks from drug use in prison and after release.

The high prevalence of depression and low social functioning experienced by our clients were cause for concern. Major depression has been associated with higher rates of relapse to drug use and poorer treatment outcome in general. If these women were to respond well to methadone treatment, they might benefit from adjunctive treatment for depression.

Whether one can generalize from our sample to the population of female drug users in Iran was unknown, as information on this group was severely lacking. One Iranian formative study managed to interview only 6 women in their sample even when specific efforts to recruit women had been made. More research is required to study female drug users in and out of drug treatment in Iran in order to match treatment to the needs of these women.

Our reliance on self-report data was a limitation. As most women were new to treatment, they were likely to be apprehensive about answering some questions and may have underreported their risk behaviors and use of drugs. For example, the high seroprevalence of hepatitis C infection and the reported low level of injection suggested that some women may have denied a history of injecting. Also, as being identified as a sex worker can lead to social isolation with subsequent repercussions on health provision and is considered a taboo subject, we limited this line of questioning to protect the safety and privacy of our clients. Our sample was somewhat different from nondrug-using women in Iran, with <2% of Iranian women smoking cigarettes, yet 79% of our clients smoked.

This study was important because it not only demonstrated that Iranian women drug users will enter treatment but also provided the first profile of female drug users and their risk behaviors in Iran. Given the women’s high level of opiate use and HIV risk behavior, their entry into treatment should be facilitated to avert HIV transmission. Our women’s clinic was in accordance with Iran’s National Strategic Plan to reach more female users and female partners of male users. In 2010, only 5 of the 173 drug treatment clinics operating in Iran were for women only. Ideally, more women-only drug services should be established, but at the very least, existing drug services should allocate specific daily times for female users only to facilitate their entry into treatment. An alternative approach could be for the introduction of couple counseling, given the high number of clients who had a drug-using partner. These women will require intensive help if they are to recover from the harms associated with years of drug use.

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Disclosure Statement

The authors have no conflicts of interest to report.

References

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AU3: There is no ref 41. Please clarify.
AU4: Give Jamshid’s full name.
AU5: Statement correct? If not, please provide statement.
AU6: Address correct?