

## Research

# Latina Injection Drug Users: A Descriptive Analysis of an Overlooked Population in South Florida

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This study examined the practices of drug use and risk of infectious blood-borne diseases such as Hepatitis C Virus (HCV), Hepatitis B Virus (HBV), and Human Immunodeficiency Virus (HIV) among Latino Injection Drug Users (IDUs) to inform intervention efforts.

**Design**

This was a descriptive study of female Latino IDUs in South Florida (n=30). Participants were recruited from non-institutional settings using targeted snowball sampling.

**Results**

Two-thirds (66.7%) of the sample were diagnosed with HBV, 83.3% with HCV, and 16.7% were HIV positive. The average times of HIV testing were 8.07 (SD=9.25, range 1-50) days, and for HCV was 3.20 (SD=2.42, range 1-10) days. Only 10% reported their health status as poor, and the average number of days in the last three months that subjects were sick or injured was 15.97 (SD=22.81, range 0-90). Almost half of all subjects (43.3%) reported that they needed health care in the past three months, but only 46.3% of those subjects received health care services.

**Conclusion**

The findings of this study show that female IDUs reported HCV, HBV, and HIV and perceived themselves as healthy. Harm reduction programs should focus on prevention of initial drug injection behavior, reducing sex risk and needle-sharing behaviors.

**Keywords:** HIV/AIDS Risk; Hepatitis C Virus; Latina Female Injection Drug Users; Sexual Risk Behaviors.

**INTRODUCTION**

Injection Drug Use (IDU) has been a major health issue within the United States (US) and the world for decades. Globally, it is estimated that about 15.9 million people inject drugs.<sup>1</sup> This behavior is reported to be the highest in China, the US, and Russia.<sup>2</sup> According to the latest estimates, there are about 6.6 million adults and adolescents who have ever injected drugs in the US.<sup>3</sup> Injection drug users are a hard-to-reach population with a heightened risk of contracting viruses that are transmitted via blood-borne exposure. Common examples of these in-

fectious viruses are Hepatitis C Virus (HCV), Hepatitis B Virus (HBV), and Human Immunodeficiency Virus (HIV) infection. It has been reported that injection drug use is a major contributor in the upsurge of incidence rates of the HCV and HBV, and if not treated, it can lead to cirrhosis and liver cancer.<sup>4</sup> People Who Inject Drugs (PWID) account for about 10 million people of all those infected with HCV, 1.2 million people of all those infected with HBV and 3 million of all HIV cases on a global level.<sup>2,4,5</sup> In 2010, 8% of new HIV cases in the US were due to injection drug use.<sup>6</sup> It has also been reported that about 50% of all new HCV cases arise due to injection drug use.<sup>7</sup>

The risk of contracting blood-borne infections (HBV, HCV, and HIV) is further amplified by one's ethnic background and gender. For example, Latinos are twice as likely to be diagnosed in the late stages of HIV infection in comparison to their non-Latino White counterparts.<sup>8</sup> IDUs of Latino descent are at a higher risk of contracting HCV, HBV, and HIV than non-Latino Whites,<sup>9</sup> reported that the incidence of HIV is estimated to be about 3 times higher among Latinos than among non-Latino Whites, with Latinos accounting for about 21% of new HIV cases.

Gender further compounds one's risk of contracting different viruses, especially among Latina IDUs. Previous studies have suggested that female IDUs' sexual and injection social networks tend to overlap. Such studies have also shown that female IDUs are more likely to be influenced by their sexual partners' injection risk behaviors, including being introduced to injection drug use through their sexual partners.<sup>10-12</sup> A gender-based study by Bryant and colleagues (2010) among IDUs in heterosexual relationships reported that male IDUs more commonly injected their partners as well as prepared the drugs and obtained the needles, placing the female partner at greater risk because they did not take an active role in practicing behaviors that may reduce the risk of HCV, HBV or HIV.<sup>13</sup> In addition, women have been reported to be less likely to refuse using a shared needle due to the fear of hindering the relationship.<sup>13,14</sup> The study by Bryant and colleagues (2010) also found that female IDUs were at higher HIV risk due to sharing syringes and having high-risk sexual partners.<sup>13</sup> A study on IDUs in the Washington DC area, conducted by Magnus and colleagues (2013), illustrated that female IDUs are more likely to experience depressive symptoms, which inevitably affected their HIV testing, access to care, and drug use than their male counterparts.<sup>15</sup>

Although previous studies<sup>13-15</sup> have shown that injection drug use is a pivotal issue with regard to the risk of contracting HCV, HBV, and HIV, only a few studies have focused on drug use and other high-risk behaviors in female IDUs, and no studies have specifically focused on Hispanic female IDUs. The aim of this study is to describe the practices of drug use and the level of risk of infectious blood-borne diseases (such as HCV, HBV, and HIV) among Latinos, in order to inform culturally appropriate intervention efforts.

## METHODS

### Sample and Respondents

The data used for this study was drawn from a study, which was implemented from 2001 through 2006 among Latino Injection Drug Users (IDUs) in South Florida. The first year of the parent study was focused on recruiting participants, and the baseline data used in this study was collected in the first 3 years of the project. The parent study focused on examining the prevalence of HCV, HBV, and HIV infections and the associated risk factors among Latina IDUs. The sample was composed of 240 Latino IDUs (n=240) who were recruited from non-institutional settings (e.g., streets, vacant lots, parks, copping and shooting spots) across Miami-Dade County, Florida, using a targeted snowball sampling strategy.<sup>16</sup> This study included 30 IDU Female Latinas. The inclusion criteria were being a female adult (18-years of age or older), or Latino origin, and a resident of Miami-Dade County, including homeless persons. In addition, participants must have within the past 90 days engaged in drug use. During the parent study, once an individual demonstrated an interest in the study, an informed consent form was completed. Potential participants who did not want to participate were

offered services or referrals they may have needed and provided with harm reduction items (e.g., condoms, bleach, and prevention information regarding HCV, HBV, and HIV) as appropriate for their situation. A twenty-five-dollar incentive was provided to compensate participants for their time.

### Measures

The trained staff through Computer Assisted Personal Interview (CAPI) technology collected questionnaire data. The questionnaire included the following sections: (1) Demographic Section; (2) Drug Use History; (3) Alcohol Use History; (4) Sexual History; and (3) Health History. All data were self-reported. Demographic data included age, country of birth, education, and marital status. Drug Use History included questions regarding the type of drug use, age of first use, method of intake, and hygienic precautions during drug use. Alcohol Use History included questions on age of first use, frequency of use, and problem drinking. Sexual History included questions on a number of partners, type of sex (oral, vaginal and anal) and exchange of sex for money and drugs. Health History included questions regarding general illness and STDs including HIV, HCV, and HBV.

### Statistical Analyses

Active cervical infection, uterine anomaly, fibroid uterus, undiagnosed abnormal uterine bleeding, malignant pelvic tumors and, allergy to misoprostol or diclofenac sodium.

## RESULTS

### Demographic Characteristics

A total of 30 Latina female IDUs were assessed. The average age of subjects was 35.93 (SD=9.17, range 18-56) years. A majority (86.7%) of subjects reported being born in the US, with 6.7% born in Portugal and 6.7% born in Cuba. Of those born in the US, 80.8% were of Puerto Rican descent. Only 3.3% of subjects had completed 8th grade or less, 40% had attended some high school, 26.7% had completed high school, 23.3% had attended some college or technical school, and 3.3% had completed college. Ninety percent of subjects were unemployed, 63.3% of subjects were single/never married, 6.7% of subjects were married, and 30% were divorced. Forty percent of subjects reported living with a partner, and 40% of subjects reported living on the streets or in an abandoned building. The average number of years the subjects had lived in South Florida was 13.27 (SD=13.16, range 0-48) years.

### Prevalence of HCV, HBV, and HIV Infection and Health Variables

Table 1 shows the prevalence of Hepatitis C, Hepatitis B, and HIV in the sample. The average number of times participants had tested (lifelong testing) for HIV was 8.07 (SD = 9.25, range 1-50) and the average number of times they had tested (lifelong testing) for Hepatitis C was 3.20 (SD =2.42, range 1-10). Twenty percent of subjects reported having been told by a doctor that they have one or more Sexually Transmitted Diseases (STDs). Among those diagnosed with an STD, 6.7% reported having been diagnosed with gonorrhea, 13.3% reported having been diagnosed with syphilis, and 6.7% reported having had chlamydia. Only 10% of subjects reported their health status as poor despite high rates of illness. The average number of days in the last three months on which subjects were sick or injured was 15.97 (SD=22.81, range 0-90). Almost half of all subjects (43.3%) reported that they needed health care in the past three months, but only half of those subjects (46.3%) had received healthcare services. Eighty percent of all subjects reported that they

have no health insurance.

**Table 1.** Prevalence of STD among participants (n=30).

Diagnoses	%
Hepatitis B	66.70%
Hepatitis C	83.30%
HIV	16.70%
Gonorrhea	6.70%
Syphilis	13.30%
Chlamydia	6.70%

### Lifetime History of Injection Drug Use

Eighty-three percent of subjects reported injecting heroin and cocaine together, 6.7% of subjects had injected heroin and amphetamines together, all subjects had injected heroin alone, 76.7% of subjects had injected powder cocaine alone, and 56.7% of subjects had injected crack cocaine alone (Table 2). None of the subjects reported ever-injecting amphetamines in the absence of injecting another drug.

**Table 2.** Injection drug use, alcohol use, sex-risk behaviors, and trauma history reported by the participants (n=30)..

Injection Drug Use	
Injected heroin alone	100%
Injected powder cocaine alone	76.70%
Injected crack cocaine alone	56.70%
Injected heroin and cocaine together	83.00%
Injected heroin and amphetamines together	6.70%
Alcohol Use	
Consumed alcohol and able to stop drinking	87.00%
Drank weekly and are unable to stop drinking	10.00%
Drank almost daily and are unable to stop drinking	3.00%
Failed to meet expectations due to drinking	13.30%
Need drink after a heavy drinking session	13.30%
Had feelings of guilt or remorse after drinking	13.00%
Unable to remember events after drinking	16.70%
Sex-risk Behaviors	
Engaged in oral sex during the last three months	93.30%
Engaged in vaginal sex during the last three months	93.30%
Engaged in anal sex during the last three months	23.30%
Engaged in sex for money	63.30%
Trauma History	
Ever threatened with a gun	43.30%
Ever shot by a gun	13.00%
Ever threatened with a weapon other than a gun	53.30%
Ever beaten up	73.30%
Ever sexually assaulted	43.30%
Physical abuse during their childhood	36.70%
Sexual abuse during childhood	43.30%

### Injection Drug Use Behaviors

Most subjects (93.3%) reported buying their syringes, while 6.7% reported getting them from another drug user. A majority of subjects

(83.3%) reported injecting drugs with another IDU in the last 3 months. (Table 3) shows the injection drug use behaviors of the participants. Forty-three percent of subjects reported having used a shooting gallery during the last 3 months. Of those who shared syringes with another drug user, 3.3% stated that there was only one syringe available, 3.3% said they needed help injecting, 16.7% said they were injecting with people they trusted, and 26.7% reported that they were “dope sick” or in withdrawal. The average number of times a syringe was used was 7.37 (SD =7.00, range 1-30). Two-third of subjects (66.7%) reported receiving drug treatment at some time during their life. Participants reported different methods of obtaining drugs: 96.7% of subjects reported getting drugs by purchasing them; 40% reported that someone else purchased drugs for them; 26.7% reported that they had been given drugs, and 23.3% of subjects reported doing work to obtain drugs. On average, subjects injected drugs 6.50 times (SD=4.33, range 1-20) in the last 3 months. The average number of injection partners was 1.50 (SD=1.25, range 0-5), and the average number of injection partners with whom subjects shared injection equipment was 0.67 (SD=.88, range 0-3).

**Table 3.** Injection drug use behaviors reported by the participants (n=30).

Risk behavior	Subjects who did not engage in the behavior	Subjects who always engaged in the behavior
	Shared a cooker	23.30%
Shared cotton	33.30%	40.00%
Shared rinse water	43.30%	23.30%
Transferred drugs from another syringe	46.70%	10.00%
Shared needles	50.00%	16.70%
Cleaned a shared needle	66.70%	13.30%
Used a Shooting Gallery	56.70%	33.30%

### Alcohol Use

Eighty seven percent of subjects reported consuming alcohol and being able to stop drinking when they choose to, while 10% of subjects reported that they drink weekly and are unable to stop drinking, and 3% of subjects reported that they drink almost daily and are unable to stop drinking (Table 2). Forty percent of subjects reported having had six or more drinks daily, weekly, or monthly. Thirteen percent of subjects reported failing to meet expectations due to drinking, and 13.3% of subjects reported needing a drink after a heavy drinking session. Thirteen percent of subjects reported having feelings of guilt or remorse after drinking, and 16.7% of subjects reported being unable to remember events after drinking. Ten percent of subjects reported being injured because of their drinking. The average number of drinks per day was 1.53 (SD=.94, range 1-5).

### Sex-Risk Behaviors

Most subjects (93.3%) reported having engaged in oral sex during the last three months, 23.3% reported engaging in anal sex during the last three months, and 93.3% reported having engaged in vaginal sex during the last three months. Two-thirds of subjects (63.3%) reported having engaged in sex for money and all of those subjects reported having used the money for drugs. Only one subject reported receiving drugs for sex during the last three months, reported giving someone money for sex, and only two subjects reported giving someone drugs for sex. The aver-

age number of lifetime male sex partners was 123.27 (SD=214.97, range 0-1000), and the average number of lifetime female sex partners was 8.23 (SD=20.10, range 0-100). The average number of sex partners during the last three months was 24.10 (SD=37.11, range 0-100).

**Trauma History**

Forty three percent of subjects reported ever having been threatened with a gun, with 20.0% reporting being threatened with a gun during the last 3 months (Table 2). Thirteen percent of subjects reported that they had been shot at, with 6.7% being injured by a gunshot. Slightly more than half of subjects (53.3%) reported being threatened with a weapon other than a gun. A majority (73.3%) of subjects reported that they had been beaten up in their lifetime. Twenty percent of subjects reported having been beaten up during the past three months. Two-thirds (66.7%) of subjects reported having been a victim of domestic violence, and 63.3% of subjects reported having been raped/sexually assaulted. One-third of subjects (36.7%) reported experiencing physical abuse during their childhood, and 43.3% reported experiences of sexual abuse during childhood. Fifty percent witnessed alcoholism during their childhood, 10% witnessed heroin use during their childhood, and 6.7% witnessed crack cocaine use during their childhood.

**Readiness to Change Drug Using Behavior**

All subjects in this study reported ambivalence about stopping their injection drug use. Although 90.0% of subjects reported that they want to make changes in their drug use, they feel they cannot change their drug use behaviors (Table 4). In addition, 90.0% of subjects believe they will quit sometime in the future. Two-thirds of subjects (66.7%) reported that they plan to quit drug use within six months. Only 30.0% of subjects reported that it would be unlikely for them to inject in a year. Twenty percent of subjects expressed the belief that their drug use is under control, and 80% of subjects reported that they currently need help for their drug use.

**Table 4.** Readiness to change drug using behavior reported by the participants (n=30).

Want to changes drug use behaviors, but feel they cannot	90.00%
Plan to quit drug use within six months	66.70%
Unlikely to inject in a year	30.00%
Believe that drug use is under control	20.00%
Currently need help for drug use	80.00%

**DISCUSSION**

Drug use and sexual risk behaviors among Latina IDUs have been understudied. Several important observations were made in the study that is worthy of note. Similar to other studies, including those on female IDUs, heroin, and cocaine were identified as the most commonly used drugs.<sup>17</sup> Several studies on injection drug use have shown that cocaine use is associated with polydrug use and several risky behaviors.<sup>18,19</sup> Participants also reported a history of trauma and risky sexual behaviors.

In this studies sample, HBV and HCV rates were very high. In addition, about 22% and 16.7% of participants reported having STDs and HIV. Despite these rates, participants continued to engage in high-risk sexual behaviors, like engaging in sexual intercourse without condoms and with multiple sexual partners. Two-thirds of the participants reported engaging in sex for money. The multifaceted interaction be-

tween prostitution and injection drug use poses a big challenge to HIV and STD prevention programs.<sup>20,21</sup> The findings showed high rates of needle sharing and sharing drugs transferred from another user’s syringe. Studies have shown that the rate of transmission of HIV is far higher through blood-to-blood contact, as it occurs among IDUs than through sexual intercourse.<sup>22</sup> Hence, future studies should focus on prevention interventions that address both transmission routes for HCV, HBV, and HIV.

Participants reported rarely using condoms and had multiple sexual partners. These findings of low condom use and a high number of sexual partners are consistent with other studies among IDUs.<sup>20,21</sup> Female IDUs who also engage in sex for money place themselves in a high-risk environment in which rates of HIV and STDs are very high. Drug-using behavior pushes many women into prostitution in order to maintain the drug-using habits for both themselves and for their partners. All subjects reported using the money they received from prostitution to buy drugs. Impairments in judgment due to drug use also increase risky behaviors like inconsistent use of condoms and multiple sexual partners. Intervention efforts for female IDUs should focus on the prevention of STDs and prostitution.

Only a small proportion of the participants used cooker, cotton, and water to rinse when injecting drugs. A high rate of HCV infection was found among female IDUs. High risk of HCV infection among IDUs can be attributed to the rate of syringe sharing in the population and natural history of an HCV infection.<sup>23</sup> The chance of infection of HCV following a needle stick injury is far greater than that for HIV. Previous studies have shown that factors like the use of cocaine, speedball, and frequent drug injection predicted the rate of HCV among IDUs.<sup>23</sup> Needle sharing and sharing of injection paraphernalia like cotton, water, cookers, and syringes are the main routes of HCV transmission among IDUs.<sup>18,19</sup> Hence, prevention measures should focus on the prevention of sharing needles and other injection equipment.

The high rates of HBV show that the current efforts are not adequate for this high-risk population. The high rates of HBV could also be reflective of the fact that these participants did not have proper access to care or were dependent on emergency departments for medical care, which usually do not offer routine vaccinations.<sup>24,25</sup> Hence, a greater focus on education regarding Hepatitis B infection, screening, and preventive vaccinations in an attempt to reduce Hepatitis B infection among this high-risk population are important.

History of trauma was highly prevalent in this cohort. Trauma included domestic violence, sexual assault, childhood physical and sexual abuse, and physical injury with weapons including guns. Many studies have shown a significant association between childhood sexual abuse and the initiation of injection drug use behavior.<sup>26,27</sup> This reiterates the importance of interventions that aim to prevent childhood abuse and maltreatment and the adverse influence of childhood abuse on future high-risk behaviors. In this study, a very high prevalence of domestic violence and sexual assault was found. These results are consistent with past studies that have shown a similar overall prevalence of sexual assaults and domestic violence among female IDUs.<sup>28,29</sup> Violence against women in unfettered drug-based cultures and economies can be explained through risk environment theory<sup>30,31</sup> identified a complex interaction between gender, violence, and sexual risk in the lives of female IDUs.<sup>32</sup> argues that the subservient position of women in street-based drug trade and risky survival strategies, such as prostitution, leads to multidimensional violence. This, in turn, could make gender inequality

more obvious and thus result in women being more vulnerable to behaviors like risky sexual practices.<sup>33</sup> Participants in this study reported high rates of homelessness. Forty percent of subjects reported living on the streets or in an abandoned building. Hence, programs like supervised injection centers, restructuring of drug enforcement plans and stable and safe housing should be a focus for preventive and supportive measures for female IDUs in South Florida.

Health care access was limited to participants in this study. The majority of participants reported not having health insurance. In addition, over 40% reported needing healthcare, and about half of those participants did not receive any healthcare. Furthermore, participants reported that they had been sick or injured for approximately 16-days in the past three months. The limited access these women have to healthcare combined with their significant health problems is concerning. In addition, despite their illnesses, the majority of subjects continue to engage in risky sex and risky injection drug use behaviors.

Although all of our subjects reported ambivalence about stopping their injection drug use, two-thirds of subjects reported that they believe they will stop using injection drugs within the next six months. Most subjects reported that they need help to stop their drug use. In addition, the majority of subjects reported that, although they would like to change their drug use behaviors, they feel that they cannot. These findings indicate the need for interventions that encourage readiness to change.

This study had some limitations. Since this is a descriptive study, we were not able to find any associations of causality. The majority of the questions including the drug and alcohol self-report inquiries and all the participants are drug and alcohol users. This could have led to memory and recall biases. In addition, these questions are also susceptible to social desirability bias where participants answer the questions in a favorable and socially desirable way. This bias could interfere with the interpretation of average tendencies and individual differences thus decrease the internal validity of the study. Finally, our sample size was small and participants were recruited from Miami-Dade County. Hence, caution should be used when generalizing the results to other populations.

The women in this study have substantial health issues that could spread to others or worsen as different viral strains are acquired. It is also concerning that, the participants in this study continue to engage in risky sex and IDU behaviors and have limited access to medical care. Future studies should emphasize the need for additional harm reduction programs focused on sex and drug risk reduction intervention. Harm reduction programs should be aimed at the prevention of initial drug injection behavior, reduce sex risk and needle sharing risk, aid women to be empowered to enact change, address histories of trauma, empower women not to adopt their partners' unhealthy lifestyle behaviors, and educate women about ways continued high-risk behaviors may affect their health. In addition, HIV/STD and Hepatitis prevention programs should consider the specific needs and characteristics of Hispanic female IDUs when designing intervention strategies.

## CONCLUSION

The findings of this study show that female IDUs reported HCV, HBV, and HIV and perceived themselves as healthy. Harm reduction programs should focus on prevention of initial drug injection behavior, reducing sex risk and needle-sharing behaviors.

## CONFLICTS OF INTEREST

We have no conflict of interests with no body and have nothing to declare.

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