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Social and Structural Challenges to Drug Cessation Among Couples in Northern Mexico: Implications for Drug Treatment in Underserved Communities

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Abstract

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Conflicts of interest

None.

Background—Available drug treatment modalities may inadequately address social and structural contexts surrounding recovery efforts.

Methods—This mixed methods analysis drew on (1) surveys with female sex workers and their intimate male partners and (2) semi-structured interviews with a subsample of 41 couples (n = 82 individuals, 123 total interviews) in Northern Mexico. Descriptive and content analyses examined drug cessation and treatment experiences.

Results—Perceived need for drug treatment was high, yet only 35% had ever accessed services. Financial and institutional barriers (childcare needs, sex-segregated facilities) prevented partners from enrolling in residential programs together or simultaneously, leading to self-treatment attempts. Outpatient methadone was experienced more positively, yet financial constraints limited access and treatment duration. Relapse was common, particularly when one partner enrolled alone while the other continued using drugs.

Conclusions—Affordable, accessible, evidence-based drug treatment and recovery services that acknowledge social and structural contexts surrounding recovery are urgently needed for drug-involved couples.

Keywords

Drug use; Drug treatment; Methadone; Medication-assisted therapy; Couples; Mexico

1. Introduction

Drug treatment services targeting individual drug users may not adequately address the social and structural contexts that surround drug cessation efforts and success (Simmons, 2006). In addition to limited drug treatment access, research has highlighted the role of interpersonal and relationship dynamics in shaping recovery efforts and success (Dobkin, De, Paraherakis, & Gill, 2002; Lewandowski & Hill, 2009). In the United States, women are less likely to enter substance use treatment programs than men (Greenfield et al., 2007), which has been linked to a lack of social support from male partners or even pressure for women to continue using drugs (Amaro & Hardy-Fanta, 1995; Falkin & Strauss, 2003; McCollum, Nelson, Lewis, & Trepper, 2005; Riehman, Iguchi, Zeller, & Morral, 2003; Rivaux, Sohn, Armour, & Bell, 2008; Trulsson & Hedin, 2004). As a result, for many couples who use drugs, cessation efforts and success may be limited until both partners enter treatment and are able to support each other throughout the recovery process (Rhodes & Quirk, 1998). Unfortunately, even when partners are supportive of each other's drug cessation efforts, most existing treatment modalities do not accommodate couples (both partners jointly) or acknowledge relationship contexts (Simmons, 2006). Few residential treatment programs have the capacity to provide family or couples-based therapy (SAMHSA Center for Substance Abuse Treatment, 2008; Werner, Young, Dennis, & Amatetti, 2007), and some evidence-based recommendations include cautionary language regarding involving partners in women's recovery efforts (SAMHSA Center for Substance Abuse Treatment, 2009). Beyond the United States, and particularly in resource-poor settings, research on couples' treatment and recovery experiences remains scarce. The objective of

this mixed methods study was to examine drug treatment and recovery experiences among socially marginalized couples in Northern Mexico.

1.1. Illicit drug use and treatment needs in Northern Mexico

In communities along Mexico's northern border with the United States, the prevalence of drug use has increased dramatically in recent years due to spillover from drug trafficking routes that carry heroin, cocaine, methamphetamine and other illicit drugs into U.S. markets (Brouwer et al., 2006; Bucardo et al., 2005). Injection drug use has also become more prevalent, particularly in urban areas (Instituto Nacional de Psiquiatría, 2011; National Council Against Addiction, 2008; Strathdee & Magis-Rodriguez, 2008). Increasing drug use and injection have been linked to numerous health and social harms in Northern Mexican cities (Strathdee & Magis-Rodriguez, 2008), which include HIV (Strathdee et al., 2008), hepatitis C (Frost et al., 2006; White et al., 2007), tuberculosis (Garfein et al., 2009), and overdose (Verdugo et al., 2013). Drug trafficking-related violence has simultaneously increased, attracting international attention and funding (Molzahn, Ríos, & Shirk, 2012).

In response to increasing drug-related violence and public health harms associated with drug use in the Northern border region and throughout the country, Mexico passed federal drug policy reforms in 2009 (National Council Against Addiction, 2010) that partially decriminalized drug possession for personal use and called for national expansion of drug treatment services including opioid substitution therapy (Moreno, Licea, & Ajenjo, 2010; Werb et al., 2015). Despite the documented need for substance use treatment services in this setting, numerous challenges exist within the predominant drug treatment modalities in the border region, which include private anexos (in-patient residential centers) offering *ayuda mutua* (peer support programs based loosely on the U.S. twelve-step approach) with or without the provision of professional care or supervision (Diario Oficial de la Federacion, 2012; Ramirez Bautista, 1987; Rosovsky, 1998, 2009; Secretaría de Salud, 2009). While many *annexos* require payment for typical three-month stays, others run by religious organizations are free of charge and more commonly accessed by those with scarce resources. Understanding drug treatment and recovery experiences among socially marginalized drug users in communities heavily affected by drug use could help identify opportunities for improving access to and quality of services in the context of Mexico's ongoing national drug policy reforms.

1.2. Drug treatment seeking and uptake in Northern Mexico

This study takes place in Tijuana, Baja California (adjacent to San Diego, California), and Ciudad Juarez, Chihuahua (across from El Paso, Texas), the two most populous Mexican border cities. Tijuana may have the largest number of people who inject drugs (primarily heroin) per capita in the country (Instituto Nacional de Psiquiatría, 2011; Strathdee & Magis-Rodriguez, 2008). Methamphetamine use is also increasing in Baja California, which is now cited as a primary reason for drug treatment seeking, followed by heroin (Instituto Nacional de Psiquiatría, 2011). Former and current drug treatment clients in Tijuana have described negative experiences with anexos (residential centers) including verbal and physical mistreatment resulting in entrenched distrust and cynicism among drug users (Syvertsen et al., 2010). The up-take of outpatient methadone maintenance services in

Tijuana has been low to date, possibly due to limited availability (e.g., only one public and two private methadone clinics operated during the study period), prohibitive costs relative to income, and the stigma associated with methadone among already socioeconomically marginalized drug users (Earnshaw, Smith, & Copenhaver, 2013; Harris & McElrath, 2012; Lopez, 2009; Sánchez Marcial, 2003). In Ciudad Juarez, heroin is the primary substance motivating treatment seeking (Instituto Nacional de Psiquiatría, 2011). Less information is available on the quality or accessibility of methadone or other medication-assisted treatment services in Ciudad Juárez, yet abundant media reports have highlighted incidents of violence within residential centers (Lacey, 2009) and only one public methadone clinic was operating during the study period (Bucardo et al., 2005).

Most available data on drug treatment experiences and satisfaction in Mexico have been collected from men who have reported negative experiences, as in the study described above (Syvertsen et al., 2010). However, there is substantial overlap in these communities between populations of people who use drugs and women who exchange sex (Strathdee & Magis-Rodriguez, 2008). One qualitative study of female sex workers who injected drugs in Tijuana found that intimate male partners played both positive and negative roles in women's recovery attempts: while some partners provided financial and emotional support to help women enter drug treatment, many partners were drug-dependent themselves and either enabled women's continued drug use or directly discouraged drug treatment (Hiller, Syvertsen, Lozada, & Ojeda, 2013). However, no research to date has documented couples' drug treatment experiences by involving both partners, providing a limited understanding of the complex role of social and partner support surrounding drug use and cessation efforts.

Given the need to improve the availability, quality, and relevance of drug treatment for socially marginalized populations, this mixed methods study sought to examine drug cessation and recovery experiences among sex workers and their intimate (non-commercial) male partners in Tijuana and Ciudad Juarez. The overall objective of this study was to develop recommendations for the design and delivery of drug treatment and integrated health and social services for under-served communities in the context of Mexico's legislative reforms.

2. Materials and methods

2.1. Study design and population

This study draws from *Proyecto Parejas* (Spanish for "Couples' Project"), a prospective, mixed-methods study of the social epidemiology of HIV/STIs among 214 female sex workers and their primary intimate male partners in Tijuana and Ciudad Juarez (n = 428). The overall goal of *Proyecto Parejas*, as previously detailed (Syvertsen et al., 2012), was to examine patterns of high risk sexual and substance use behaviors at the individual and dyad levels to inform health interventions. Women were recruited from areas where sex work and drug use were known to occur. Eligible women were ≥ 18 years old, reported lifetime "hard" drug use (including heroin, methamphetamine, cocaine and/or crack), exchanged sex within the past month, had an intimate male partner for at least six months, and were not determined to be at immediate risk for life-threatening intimate partner violence (IPV) as a result of participating. Of 335 women who were approached by recruiters and screened, 245

(73.1%) passed this primary screener. Ineligibility related to lack of lifetime “hard” drug use (*n* = 35; 10% of those screened), no recent sex work (*n* = 23; 7%), and worrying about IPV (*n* = 14, 4%). Eligible women were invited to bring their male partners into study offices to assess men's eligibility (being ≥ 18 years old) and verify relationship status. Of the 239 couples who presented for couples verification screening (Syvertsen et al., 2012), 230 (96%) were eligible, of whom 214 (90%) agreed to participate and provided written informed consent for quantitative surveys, HIV/STI testing, and qualitative interviews. Institutional review boards of the University of California at San Diego, Tijuana's Hospital General, El Colegio de la Frontera Norte (Tijuana), and the Universidad Autónoma de Ciudad Juárez approved all study protocols.

2.2. Data collection

From 2010 to 2011, trained interviewers used laptop computers to administer individual questionnaires lasting 1–2 h in private rooms. Measures were based on past work with this population (Strathdee et al., 2008) and covered socio-demographics (e.g., age, birthplace, migration status), relationship characteristics (e.g., relationship duration using an average of both partners’ reports within couples, children), sexual behaviors (e.g., condom use together and with other partners, numbers and types of partners), history of and current drug use (e.g., types of drugs used, frequency, injection practices), current perceived level of need for drug treatment (ranked from “no need” to “urgent need”), and drug treatment experiences (e.g., utilization of specific inpatient and outpatient services including *centros* [rehabilitation centers] and methadone, self-treatment, and outcomes of past treatment efforts including relapse).

To further explore relationship dynamics and contexts, a subsample of 41 couples was purposively sampled from the overall cohort to participate in additional in-depth qualitative interviews. This subsample was selected to have maximum variation in age, relationship duration, types of drugs recently used, and male employment status (Johnson, 1990). Bilingual interviewers used semi-structured guides to conduct individual in-depth individual and joint interviews in private offices with 41 couples (18 couples in Tijuana and 23 couples in Ciudad Juarez; total 123 interviews). The qualitative interviews explored social and structural contexts and relationship dynamics surrounding drug use and treatment experiences. All interviews were audio recorded and transcribed verbatim following a structured protocol (McLellan, MacQueen, & Neidig, 2003).

2.3. Data analysis

This mixed methods analysis drew from baseline quantitative data to describe drug treatment experiences in the entire cohort, while qualitative data help contextualize a deeper understanding of treatment attendees’ perceptions of services. First, means and frequencies were calculated for socio-demographic characteristics, drug use behaviors, and experiences with different treatment modalities. Quantitative descriptive statistics compared these characteristics between women and men using t-tests or Wilcoxon rank sum tests for continuous variables and Pearson chi-square or Fisher exact tests for binary outcomes.

Next, thematic analyses of qualitative data involved a collaborative, multi-step process. A bilingual research team developed an initial code-book consisting of key topics and emergent themes (MacQueen, McLellan, Kay, & Milstein, 1998). Four analysts independently applied codes, compared consistency in code application, discussed and resolved discrepancies in coding, and refined codes as necessary. While applying finalized codes using MAXQDA software, analysts recorded memos about important findings and discussed crosscutting themes (e.g., how relationship dynamics might influence couples' drug cessation efforts and treatment experiences). Representative quotes (using pseudonyms to protect identities) were selected to illustrate challenges couples confronted in drug cessation. Finally, mixed methods analyses followed an iterative process of discovering and confirming themes. For example, descriptive statistics identified prevalence of drug treatment experiences that qualitative data could contextualize, providing an enhanced understanding of couples' drug cessation efforts.

3. Results

3.1. Characteristics of couples

Among 214 couples (n = 428), median age was 35 years (interquar-tile range [IQR]: 29–42) and men were slightly older than women (median 37 vs. 33 years, $p < .01$; see Table 1). Median relationship duration was 3 years (IQR: 2–6). Most participants (84%) had children, either together or separately, as previously reported (Rolon et al., 2013), and 30% had children under the age of 18 years currently living with them. Lifetime illicit drug use was highly prevalent (97%). Within the past six months, most participants (87%; n = 373) had used "hard" drugs (heroin, cocaine, crack, or methamphetamine). Heroin was the most commonly reported drug used in the past six months (n = 267; 72% of current users), followed by methamphetamine (n = 134; 36% of current users), and cocaine (n = 85; 23% of current users). Most current drug users (n = 256; 69%) had also injected drugs in the past six months. Characteristics of the qualitative subsample of 41 couples (n = 82) were similar.

3.2. Couples' drug treatment experiences

Only one third (35%) of the 416 participants who had ever used drugs in the sample reported having some kind of experience with drug treatment. No couples had accessed treatment together or simultaneously. Past treatment experience primarily involved attending residential rehabilitation centers (31%), while a minority of participants had experience with methadone therapy (16%) and self-treatment (5%). However, perceived need and motivation for drug treatment were high, as described below.

3.2.1. Drug treatment need and motivation—Among current drug users, over one-third reported some need for drug treatment (37%), while 25% reported great need and 4% reported urgent need. In qualitative interviews, participants contextualized their motivation to "get clean," describing encouragement from partners and family members as well as their own desire to "find an exit" from lives consumed by drug use. For couples in which both partners used drugs, getting clean would help improve relationship functioning, quality, and financial stability, as described by Reyna, a 30 year-old woman who injects heroin and methamphetamine in Tijuana: "I imagine that if we stopped using drugs, he would provide

everything for me, in a very humble way. I am not talking about just money, but also everything else; it would all be there."

3.2.2. Limited access to residential drug treatment programs—Despite motivation for drug treatment, relationship and household dynamics also hindered drug cessation through residential programs for many couples. Childcare and financial constraints often made it impossible and even unimaginable for both partners to attend treatment together or access separate services simultaneously. Couples explained that treatment program rules and structures, including partner separation required by sex-segregated facilities, resulted in feelings of being isolated and "locked up" without being permitted family visits. This was an important concern reflected in multiple methods of data collection, with 15% of survey respondents who had never sought treatment citing concerns over family separation and several qualitative participants describing not wanting "to be locked up in there leaving my wife and kids alone" or leaving their partner alone "to struggle and run around with the baby and everything."

3.2.3. Experiences in residential drug treatment centers—Given the reality of childcare and financial constraints, couples often pooled resources so one partner could access treatment alone while the other looked after children and worked to meet financial obligations. Maintaining household financial stability was particularly challenging for partners to navigate alone because most women were primary wage earners through their sex work, which often overlapped with drug use, while many men struggled with unstable, informal wage labor that was insufficient to meet basic needs. Upon entering rehabilitation centers individually, participants described non-evidence based services (e.g., 60% of center attendees described programs with heavy religious components), mistreatment by center staff (27% reported experiencing verbal abuse and 18% physical abuse), insufficient professional services (only 31% received any professional medical attention and 62% received any medication-assisted detoxification), and unsanitary conditions. Few treatment attendees (only 11% at baseline) reported receiving HIV/STI testing during their time in centers, representing a missed opportunity for sexual health and prevention programming in this high risk population. Participants reported that consequences for breaking center rules could involve severe physical and emotional mis-treatment, including sexual harassment and other forms of psychological abuse. Mildred, a 44 year-old woman who injects heroin, reported that she escaped from a locked drug treatment facility and was found by several male staff members on a street where sex work was known to occur:

> They grabbed me and threw me to the ground, yelling, "You damn woman, look at how you are, selling yourself for a 'cura' [dose of drugs], and you still want to run away, you bitch!" That doesn't make you stop using drugs; on the contrary, you wind up with more resentment, more desire to drug yourself even more.

Compounding the hardship encountered in drug treatment centers, family and social support was limited and nonexistent for many participants. A minority of participants described treatment as providing them with an exit or "door" out of local drug environments, which, although fleeting, was perceived to be a "breath of fresh air."

3.2.4. Avoidance of residential programs and experiences with self-treatment

—To stay closer to families and partners and avoid the isolating experience induced by rehabilitation center-based programs, some couples attempted self-treatment methods to reduce drug consumption on their own without the help of professional services. Part of the appeal of self-treatment was being able to stay at home with partners and family members who could provide material and social support in overcoming withdrawal symptoms and for longer-term recovery, as described by Garcel, a 50 year-old recovering drug user and current heavy drinker in Tijuana: “A treatment that is pure love, that comes from the heart, well, you don't need *centros* [rehabilitation centers] for any of that. I am curing her [helping her recover] with protection, love, pure affection, trust and support.” Although the social support retained by staying out of *centros* was important to many couples, self-treatment at home was challenging and fraught with high risk practices such as swapping one substance for another or misusing prescription medications. Nevertheless, as described by Marta, a 45 year-old woman who injects heroin, these self-treatment strategies were more appealing than many abstinence-oriented *centro*-based programs that did not offer medication-assisted detoxification: “Without anything [for withdrawal], it is very difficult to deal with the anxiety, the bone pain, the vomiting and diarrhea.”

3.3. Experiences with methadone maintenance therapy

Methadone maintenance therapy, delivered in an outpatient setting, was viewed as a more promising option for many heroin-using couples in the study because it allowed partners to stay together. One quarter (25%) of the 267 heroin users had ever tried methadone (n = 68), which was more common among women than men (55% of women vs. 38% of men who had ever sought drug treatment had accessed methadone, $p < .05$; Table 1). Most of these participants had only enrolled in methadone therapy once (Table 2), and the median duration of their methadone use was 4 months (IQR: 1–11; Table 3). Nearly one fifth of methadone users (18%) reported struggling to be able to afford it, particularly for both partners. The financial challenges of obtaining consistent, long-term methadone maintenance, were explained in the context of family obligations, as exemplified by Cesar, a 45 year-old heroin and methamphetamine injector, who was unable to afford methadone for himself and his partner at the same time:

> I have to put something away for the food, the children's expenses, school and all that...so then I only have 100 pesos left, and if I go to ‘la metadona’ [methadone treatment facility], it costs 80 pesos [~$6 USD per day]...and I will be cured but she is going to have malilla [withdrawal], so then I don't go to la metadona and we both cure [use heroin] together instead.

Even though couples could use methadone together in theory, sharing limited resources resulted in intermittent use (e.g., going every other day) or having one partner use methadone while the other attempted quitting on their own. In these situations, some couples in the qualitative subsample described their efforts to reduce – but not completely cease – their heroin use while using methadone in order to better manage their withdrawal symptoms. This experience was common, with the majority (59%) of methadone users reported continuing to use heroin or other drugs at the same time.

3.4. Social and environmental contexts surrounding recovery and relapse

Among individuals who had successfully accessed residential treatment or methadone programs, important social and environmental contributors to relapse included the lack of aftercare services, partner's drug use, and the omnipresence of drugs in border communities. Among the participants who completed the typical three-month residential treatment programs, none described accessing aftercare services, which may have contributed to the observed 93% who relapsed quickly after leaving centers (median time to relapse was 15 days; IQR: 1–90). Even though Carol, a 32 year-old woman in Tijuana "really wanted to change," she began injecting heroin shortly after completing a residential program because she "lacked support, and it all went backwards...back to the same thing." Similarly, among participants with experience accessing outpatient methadone, none described attending support groups or other related services.

Within relationship contexts, respondents struggled with relapse because they were accustomed to a life and relationship that revolved around drug use. In addition to placing strain on relationships, continued drug use by intimate partners facilitated relapse. After returning home from treatment, as explained by Paulina (age 33), a heavy drinker and methamphetamine user in Tijuana, it was "difficult to know how to live with my partner without drugs." She went on to say that her community needed "a program for formerly addicted couples, former drug users, something that would be for people who don't use anymore and need to learn how to live together but without being high all of the time."

Beyond household and micro-social contexts, respondents also explained that the only effective method for avoiding relapse involved changing environments completely and relocating to places with lower drug accessibility, fewer drug using acquaintances, and less pervasive sex work. In addition to being exposed to continued drug use by his partner, Adrian, a 31 year-old injector in Tijuana, explained the environmental pressures to relapse upon reentering his community:

> At a center, you don't use drugs because there aren't any. But when you get out, you walk out onto the street, and a week or two later, you are all drugged. You come back to the same environment, with the same people doing drugs, and, I mean, you're going to end up doing the same thing again.

Later, in his individual interview, Adrian continued, "I have never believed in centers...if you really want to leave it [drug use], you have to leave the street; if you don't, you will never get clean." Given the prevalence of drug use in border communities and lack of aftercare services, several participants temporarily moved away to seek support from relatives, but most lacked the financial resources to leave the city or did not want to leave partners and families behind.

4. Discussion

In this sample of drug-involved female sex workers and their intimate male partners in two Mexican–U.S. border cities, only one third (35%) had ever accessed drug treatment services in their lifetimes despite two-thirds (66%) of current users reporting at least some need for help with drug cessation. Within these couples, partners often shared negative past

experiences with drug treatment services, which they characterized as being of poor quality and limited accessibility and affordability. The two thirds of participants who had never accessed drug treatment reported skepticism regarding the efficacy of services, mistrust of service providers, and reluctance to enter in-patient residential programs and become isolated from partners and families. The inability of programs to accommodate children and partners and acknowledge the social aspects of drug cessation and recovery presents an important opportunity for improving the relevance and effectiveness of services in these communities and likely many other settings (Simmons, 2006).

While this study supports previous calls for improved quality, affordability, and accessibility of evidence-based drug treatment services in underserved Mexican–U.S. border communities (Syvertsen et al., 2010), findings also carry unique implications for helping people who use drugs and are seeking recovery. Specifically, in the context of Mexico's planned national expansion of drug treatment services (Moreno et al., 2010; Werb et al., 2014), this study identified a need for treatment services that adequately address how interpersonal dynamics and structural contexts support or hinder recovery efforts in underserved urban communities. Overall, findings suggest that, in addition to improving and expanding outpatient methadone services, other out-patient couples-based recovery-support programs (i.e., for couples in which both partners are attempting drug cessation) are also urgently needed (Werner et al., 2007).

The significance of social and structural contexts in shaping drug users' recovery success implies that drug treatment services could better recognize, utilize, and support intimate and other social and family relationships (SAMHSA Center for Substance Abuse Treatment, 2009) while also providing family therapy and childcare services (SAMHSA Center for Substance Abuse Treatment, 2008, 2009). Similar to previous studies of women's recovery efforts (Greenfield et al., 2007; Simmons, 2006), most couples in this sample desired drug treatment options that they could access together or at least simultaneously. However, since most couples reported financial barriers and lack of childcare services, sex-segregated residential programs lacking childcare may be impractical for many drug users who have children. Previous research has found drug treatment to be most efficacious when both partners agree about their treatment needs (Rhodes & Quirk, 1998) and have the ability to access treatment at the same time (Simmons, 2006). Many couples in this study explained that "getting clean" together would improve their relationship functioning, financial stability, and quality of life. Several participants also described not wanting to enter treatment and leave their partners at home to struggle alone with household, parenting and childcare responsibilities. In other words, although partners within many couples agreed about their desire to get clean together and support each other's recovery efforts, many lacked the financial resources to do so successfully. With limited economic opportunities, particularly in the formal sector, most participants held informal jobs, including sex work among women. In this context, the entry of one partner into drug treatment while the other partner continued working and supporting the household often served to retain connections with the illicit drug economy.

For some heroin-dependent couples who could not enter residential treatment programs, methadone and buprenorphine maintenance represented promising options, but several

important barriers existed. During the study period, there were few public methadone services in either city, with most existing clinics being operated as stand-alone, private businesses charging clients fees for services (e.g., of approximately U.S. $7 per dose). Many participants reported continuing to use heroin and other drugs at the same time as methadone, likely because they could not afford to keep up with recommended daily dosing schedules, had difficulty attending daily visits during methadone clinic hours (Syvertsen et al., 2010; Werb et al., 2015), or pooled limited resources with partners to share individual doses. Possibly reflecting limited access to methadone services, self-treatment involving the misuse of prescription drugs (to replace illicit heroin use and help cope with withdrawal symptoms) was reported in this sample and has been documented in other research with sex workers who use drugs in this setting (Hiller et al., 2013). These concurrent use of illicit drugs and misuse of prescription medications are concerning because they may increase methadone patients' risk for overdose (Bazazi et al., 2014). Finally, of particular concern in Tijuana and elsewhere in Baja California will be the increasing use of methamphetamine, which has been associated with higher rates of heroin relapse (Dluzen & Liu, 2008; Instituto Nacional de Psiquiatría, 2011).

With the ongoing implementation of Mexico's 2009 federal drug policy reforms (National Council Against Addiction, 2010), which call for expanding access to outpatient services including medication assisted therapy (Moreno et al., 2010; Werb et al., 2015), findings from this study are particularly timely. As one of the most promising treatment options described by heroin-dependent couples in this sample, findings from this study suggest that outpatient medication assisted services require increased access to adequate and consistent methadone dosing and could also be enhanced in several other ways. Insurance coverage and affordability of methadone services would greatly benefit socially marginalized couples in this setting. Programs should explore possibilities for allowing some couples to have take-home doses of methadone to avoid the financial and logistical constraints of accessing methadone clinics every day. In addition to improved screening for concurrent substance use, couples in this study would likely benefit from methadone clinics offering HIV/STI testing, overdose prevention training with naloxone distribution, and referrals to other substance use and mental health services. Given the high levels of trauma experienced in this population (Ulibarri et al., 2015), and the interrelationships between trauma, mental health, and substance use among sex workers in the border region (Ulibarri et al., 2011, 2013), addressing trauma within the context of inpatient and outpatient drug treatment services will be important.

Finally, aftercare services that take into account recovering drug users' social relationships and home and neighborhood environments are urgently needed. Rapid relapse was common among participants, which was driven by the lack of aftercare services within a broader environment characterized by poverty, limited economic opportunity, and widespread drug use. As identified in a prior study of HIV prevention needs among couples in this setting, both women and men require mental health services as well as skills and job training that can empower them to seek employment opportunities beyond sex work and other informal jobs that likely increase exposure to drug use (Palinkas et al., 2014). Couples-based recovery services with family therapy could also prevent relapse by helping couples learn how to navigate daily stressors and enjoy their relationships while sober. Given the complexity in

how social and intimate relationships influence cessation efforts, one promising strategy could involve the adaptation of evidence-based behavioral couples therapy, which can improve relationship functioning and reduce conflict (El-Bassel et al., 2011; Fals-Stewart, O'Farrell, Birchler, Córdova, & Kelley, 2005; O'Farrell & Fals-Stewart, 2002). Another approach could follow innovative housing-first models to help move couples in recovery to neighborhoods with less drug use and more formal employment opportunity. Although the development of such programs will require dedicated resources, several couples in this study explicitly expressed interest in relocating to “healthier” environments. Finally, new and existing programs should offer integrated mental health and social services (El-Bassel et al., 2014; Jiwatram-Negrón & El-Bassel, 2014; Klostermann, Kelley, Mignone, Pusateri, & Wills, 2011; Schumm, O'Farrell, & Andreas, 2012).

This study has several limitations. First, the study sample was comprised of female sex workers and their intimate partners, representing a unique population with experiences that may not be immediately relatable for other drug using couples. However, it should be noted that there is substantial overlap between populations of people who use drugs and women who engage in sex work in Northern Mexican border cities (Strathdee & Magis-Rodriguez, 2008). Also potentially limiting generalizability, this sample included relatively stable couples who did not report serious, life-threatening IPV; as such, the sample may differ from the general drug-using population. However, findings highlight common challenges that drug using couples in other resource-poor settings likely experience and could inform drug treatment programming in diverse contexts. Second, this analysis drew from a sample of couples who were not exclusively drug involved, and the overall study was not designed to provide an in-depth examination of drug treatment experiences. Nevertheless, the prevalence of current drug use was high among both women and men in this sample and drug cessation efforts emerged as a key issue that many couples struggled with on a daily basis. The mixed methods design thus allowed a better exploration and understanding of the multiple social and structural factors surrounding couples’ treatment experiences.

In conclusion, this study provides a contextualized understanding of the drug cessation and recovery challenges that socially marginalized couples face in urban communities along the Mexico–U.S. border, where drug use is increasingly prevalent. Couples struggled to access the available drug treatment options, which could be strengthened by improved affordability and emphasis on social support, relationship dynamics, and household economic needs. Mexico's drug policy reforms and concomitant nationwide scale up of drug treatment represent an important opportunity to draw from evidence-based approaches for couples while better integrating substance use treatment with other health and social services.

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Table 1

Characteristics of female sex workers and their intimate male partners in two Mexico-U.S. border cities (n =428).

Characteristics	Women (*n* = 214)	Men (*n* = 214)	Overall (*n* = 428)
Sociodemographics & Relationship Factors			
Median age (in years; IQR)	33 (26-39)	37 (31-43)	35 (29-42)**
Median educational attainment (in years; IQR)	6 (6-9)	7 (6-9)	7 (6-9)*
Income < $200 per month	82 (38%)	104 (49%)	186 (43%)*
Ever been arrested (lifetime)	117 (56%)	141 (66%)	258 (60%)*
Median relationship duration with intimate partner (in years; IQR)	-	-	3 (1.6-5.5)
Currently lives together with intimate partner	-	-	420 (98%)
Currently has children aged <18 years living with participant	69 (32%)	58 (27%)	127 (30%)
Current Drug Use Behaviors (past 6 months)			
Used any “hard” drugs	198 (93%)	175 (82%)	373 (87%)
Heroin[a]	137 (69%)	130 (74%)	267 (72%)
Methamphetamine[a]	71 (36%)	63 (36%)	134 (36%)
Cocaine use[a]	45 (23%)	40 (23%)	85 (23%)
Crack[a]	36 (18%)	23 (13%)	59 (16%)
Injected any drugs[a]	133 (67%)	123 (70%)	256 (69%)
Perceived level of need for help with drug cessation[a]			
No need	66 (33%)	58 (33%)	124 (33%)
Some need	72 (37%)	65 (37%)	137 (37%)
Great need	50 (25%)	43 (25%)	93 (25%)
Urgent need	7 (4%)	9 (5%)	16 (4%)
Drug Treatment Experiences			
Ever sought help/treatment for drug use[b]	75 (36%)	72 (35%)	147 (35%)
Ever enrolled in a rehabilitation center[c]	68 (91%)	61 (85%)	129 (88%)
Ever enrolled in a methadone program[c]	41 (55%)	27 (38%)	68 (46%)*
Ever used medications for detoxification or treatment on one's own without center/program[c]	11 (15%)	9 (13%)	20 (14%)

[a] Among 373 current hard drug users (heroin, methamphetamine, cocaine, crack use in past 6 months).

[b] Among 416 ever (lifetime) drug users.

[c] Among 147 ever drug users who ever (lifetime) sought any type of help/treatment for drug use.

* $p < .05$.

** $p < .01$.

Table 2

Experiences in drug rehabilitation centers among female sex workers and their intimate male partners who ever enrolled in drug treatment centers in two Mexico-U.S. border cities (*n* = 129).

Experiences	Women (*n* = 68)	Men (*n* = 61)	Overall (*n* = 129)
Median # enrollments in rehabilitation centers (IQR)	2 (1-3)	2 (1-4)	2 (1-3)
Median age at first rehabilitation center enrollment in years (IQR)	30 (24-37)	32 (28-36)	32 (25-36)
Median # months enrolled in most recent rehabilitation center (IQR)	3 (1-3)	3 (2-6)	3 (1-4)
Drug that motivated most recent enrollment:			
Heroin	56 (82%)	48 (79%)	104 (81%)
Methamphetamine	8 (12%)	9 (15%)	17 (13%)
Crack	11 (16%)	6 (10%)	17 (13%)
Cocaine	7 (10%)	3 (5%)	10 (8%)
Types of services received at most recent center			
Twelve-step (e.g., "*ayuda mutua*") meetings	42 (62%)	46 (75%)	88 (68%)
Spiritual counseling	48 (71%)	29 (48%)	77 (60%)**
Clothing and other personal items	29 (43%)	18 (30%)	47 (36%)
Individual psychological counseling	24 (35%)	18 (30%)	42 (33%)
Medication-assisted detoxification	40 (59%)	40 (66%)	80 (62%)
Medical treatment from doctor/healthcare provider	25 (37%)	15 (25%)	40 (31%)
HIV/STI testing	12 (18%)	2 (3%)	14(11%)*
Job training or skill development	7 (10%)	6 (10%)	13 (10%)
Ever mistreated by rehabilitation center staff	22 (32%)	21 (34%)	43 (33%)
Relapsed after leaving most recent rehabilitation center	66 (97%)	54 (89%)	120 (93%)
Median # days drug free after most recent enrollment	15 (2-90)	15 (1-93)	15 (1-90)

* $p < .05$.

** $p < .01$.

Table 3

Experiences with methadone therapy among female sex workers and their intimate male partners in two Mexico-U.S. border cities (*n* = 68).

Experiences	Women (*n* = 41)	Men (*n* = 27)	Overall (*n* = 68)
Median # of times being in a methadone program (IQR)	1 (1-2)	1 (1-2)	1 (1-2)
Median age at first use of methadone in years (IQR)	27 (23-35)	30 (25-34)	29 (23-35)
Currently enrolled in a methadone program	13 (32%)	11 (41%)	24 (35%)
Quit methadone program	**28 (68%)**	**19 (70%)**	**51 (75%)**
It didn't work[a]	9 (32%)	8 (42%)	17 (33%)
It caused greater withdrawal than heroin[a]	6 (21%)	3 (16%)	9 (18%)
It was too expensive[a]	6 (21%)	2 (11%)	8 (16%)
It was a hassle to go to the clinic every day[a]	5 (18%)	0 (0%)	5 (10%)
Median longest period using methadone program in months (IQR)	4 (1-9)	4 (2-12)	4 (1-11)
Continued using heroin and/or other drugs during most recent enrollment in a methadone program	22 (54%)	18 (67%)	40 (59%)

[a]Among 44 ever-methadone users not currently using methadone.