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Social support and recovery among Mexican female sex workers who inject drugs

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Abstract

This qualitative study describes social support that female sex workers who inject drugs (FSW-IDUs) receive and recovery efforts in the context of relationships with family and intimate partners. We conducted thematic analysis of in-depth interviews with 47 FSW-IDUs enrolled in an intervention study to reduce injection/sexual risk behaviors in Tijuana, Mexico. FSW-IDUs received instrumental and emotional social support, which positively and negatively influenced recovery efforts. Participants reported how some intimate partners provided conflicting positive and negative support during recovery attempts. Problematic support (i.e., well-intended support with unintended consequences) occurred in strained family relationships, limiting the positive effects of support. Mexican drug treatment programs should consider addressing social support in recovery curricula through evidence-based interventions that engage intimate partners, children and family to better reflect socio-cultural and contextual determinants of substance abuse.

Keywords

social support; recovery; sex work; injection drug use; qualitative research; Mexico

1. Introduction

Social support is comprised of interpersonal transactions and assistance provided among members of an individual's social network and can buffer the negative health effects of stress (Berkman et al., 2000; Cohen, 2004). Social support plays an important role in substance users' drug use behaviors(El-Bassel & Schilling, 1994; Falkin & Strauss, 2003;Gu et al., 2008; Nyamathi, Flaskerud, & Leake, 1997; O'Dell, Turner, & Weaver, 1998; Strauss & Falkin, 2001; Sword et al., 2009). However, research on substance abuse recovery efforts by female sex workers who inject drugs (FSW-IDUs) is scarce. Data on sources and types of social support FSW-IDUs receive from family members and intimate partners and their impact on substance use and recovery can inform tailored addiction recovery and risk

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reduction interventions, including network based interventions(Syvertsen et al., 2012; El-Bassel et al., 2010, 2011, Greenfield et al., 2007). Such data are particularly needed in resource-constrained settings such as Mexico, where research on FSW-IDUs, a hard-to-reach, marginalized, and isolated population, is limited. This qualitative study describes social support that female sex workers who inject drugs receive and women's recovery efforts in the context of these social relationships

1.1 Social Support and Substance Abuse

Social support is associated with successful substance abuse recovery outcomes such as treatment completion (Beckman & Amaro, 1986; Berkman, Glass, Brissette, & Seeman, 2000; Coughey, Feighan, Cheney, & Klein, 1998). For example, among drug using women living in U.S. cities, peer support group therapy in post-inpatient treatment aftercare and halfway house settings improved women's recovery program completion rates and maintenance (Coughey et al., 1998; Huselid, Self, & Gutierres, 1991; Kaskutas, 1994). Gender-based differences in access to social support exist among drug users. Female drug users have fewer social contacts and report greater isolation and loneliness than drug-using men and non-drug-using women (Boyd & Mieczkowski, 1990; Rhoads, 1983; Tucker, 1982). Importantly, drug-using women's social support networks often include drug-using and non-drug-using family members and intimate partners (El-Bassel & Schilling, 1994; Falkin & Strauss, 2003; Gainey, Peterson, Wells, Hawkins, & Catalano, 1995; O'Dell et al., 1998). Among male and female heroin users, treatment outcomes are more favorable among women whose intimate partners support their entry into treatment (Riehman et al., 2003; Riehman et al., 2000; Eldred & Washington, 1976). Conversely, unsupportive intimate partners may discourage entry into treatment, delaying recovery (Beckman & Amaro, 1986).

The terms "negative social support" and "problematic support" have been used interchangeably, despite definitional differences (Frick, Motzke, Fischer, Busch, & Bumeder, 2005; McCathie, Spence, & Tate, 2002). "Negative social support" refers to the provision of support for a social or health-related harmful behavior. Lack of or negative social support has yielded unsuccessful recovery outcomes (e.g. continued drug use, leaving treatment, relapse) (Granfield & Cloud, 2001). Personal networks can also encourage or reinforce harmful behaviors, such as alcohol consumption, smoking or drug use (Christakis & Fowler, 2008; Rosenquist, Murabito, Fowler, & Christakis, 2010; Wills & Yaeger, 2003). "Problematic support" refers to well-intended support that inadvertently produces negative consequences (Revenson, Schiaffino, Majerovitz, & Gibofsky, 1991). Drug abuse studies examining social support use the terms "drug-related" support or "enabling behavior" to describe negative social support (El-Bassel & Schilling, 1994; Falkin & Strauss, 2003). Analyzing sources and consequences of positive, negative, and problematic social support is critical, as risky health behaviors (e.g., sharing injection equipment, unprotected sex under the influence of substances) associated with substance use often occur in social environments involving other substance-users (Granfield & Cloud, 2001; Hughes, 2007; Latkin & Knowlton, 2005). Researchers have called for additional research to elucidate the role of negative social support and health(Uchino, 2006; Uchino, Holt-Lunstad, Uno, & Flinders, 2001).

1.2 Sex work and drug use among women in Tijuana

In the U.S.-Mexico border city of Tijuana, sex work and drug use often overlap. Tijuana is home to 1.6 million people, including between 6,000-10,000 IDUs and 5,000-9,000 sex workers (Brouwer et al., 2006a; Patterson et al., 2008; Strathdee et al., 2005). Sex work may take a variety of forms (e.g., call girl, escort, brothel worker, bar/casino worker, street-based sex worker). Sex workers experience varying levels of autonomy and power, victimization, and marginalization within their communities (Weitzer, 2009). These situations have

important implications for illicit drug use and engagement in HIV risk behaviors and infection. Injection drug use is prevalent in Northern Mexico's border region, in part due to drug trafficking and production activities (Brouwer et al., 2006b; Bucardo et al., 2005). In addition, sex work is quasi-regulated in some communities, leading to the existence of well-established red light districts (Sirotin et al., 2006). Tijuana's FSW-IDUs often seek drug treatment services, but sex work, poverty, social isolation and marginalization make recovery difficult (Strathdee et al., 2011; Syvertsen et al., 2010).

FSW-IDUs' higher risk for contracting and transmitting HIV may result from combined instances of unsafe behaviors in either domain, and other characteristics that drive their HIV risk behaviors. Initiation of sex work previous to injection drug use, or vice versa, varies among FSW-IDUs, and thus women may present different risk profiles (Morris et al., 2012). For example, a woman may use sex work to pay for drug use, or may begin sex work first, and use drugs to cope with traumas endured from clients. In addition, FSW-IDUs' non-condom use was significantly associated with deficient social support and self-hating. Conversely, data from research with non-injecting FSWs did not identify these associations (Lau et al., 2012). In Tijuana, FSW-IDUs may have access to drugs in sex work environments or receive drugs from clients as payment for sexual transactions; drugs may also be used to cope with trauma or sex-work related stressors (Baseman, Ross, & Williams, 1999; Cusick & Hickman, 2005; Goldenberg et al., 2010; Weeks, Grier, Romero-Daza, Puglisi-Vasquez, & Singer, 1998). One study conducted with 620 FSW-IDUs in Tijuana, Baja California and Ciudad Juarez, Chihuahua, cities which border the U.S., found that FSW-IDUs spent approximately 10 hours per day on the street, earning ~$17.5 USD for a sex act, and even more when engaging in unprotected sex (Strathdee et al., 2011). Additionally, 33% of FSW-IDUs reported "always/often" injecting drugs with clients and 21% reported injecting drugs with intimate partners or family members (Strathdee et al., 2011). This study documented an HIV prevalence rate of 5.3% at baseline compared to a national prevalence of 0.3%Most FSW-IDUs were unaware of their infection (Strathdee et al., 2011; Strathdee & Magis-Rodriguez, 2008). Research on FSW-IDUs has concentrated on the epidemiology of HIV transmission and interventions designed to reduce HIV risk. Studies focused on the social aspect of substance abuse in relation to recovery are scarce in low- and middle- income countries (Wariki et al., 2012). Interventions for FSWs in Brazil and the Dominican Republic have involved condom use and peer education around sexual risk reduction for HIV (Kerrigan et al., 2006; Lippman et al., 2010) but network or couples based interventions with intimate partners of FSW-IDUs are uncommon.

As part of recent legislation decriminalizing small amounts of illicit drugs, Mexican states are charged with the task of increasing availability and accessibility to drug treatment services (Cámara de Senadores de Mexico, 2009; Syvertsen et al., 2010). Data on drug use among FSWs in Mexico is inconsistent, and possibly, underreported. A study of 295 sex workers in Tijuana and Ciudad Juarez indicated that approximately half had ever injected drugs; in Tijuana, one third of FSWs reported using marijuana, cocaine or methamphetamine in the past month (Patterson et al., 2006). However, other studies find that drug use among Mexican sex workers is rare (Rivera, Vicente-Ralde & Lucero 1992; Juarez-Figueroa et al., 1998). Contradictory data on drug abuse among sex workers may diminish the perceived need for drug abuse research among FSWs in Mexico.

This exploratory qualitative study describes: (1) the types of social support that FSW-IDUs in Tijuana receive from family and intimate partners, and (2) FSW-IDUs' experiences with recovery efforts in the context of social relationships. Understanding the role of social support in relation to FSW-IDUs' drug use and recovery efforts may guide the modification of existing curricula or the development of new interventions. Specifically, documenting the

roles and influences of members of FSW-IDUs' personal networks can inform the structure and content of substance use interventions.

2. Materials and Methods

2.1 Parent Study

Between October 2008 and October 2009, 620 FSW-IDUs were recruited into a multisite behavioral intervention study, including Tijuana (Strathdee et al., 2011). The intervention aimed to reduce injection and sexual risk behaviors associated with HIV and sexually transmitted infection (STI) acquisition. Outreach workers approached women who appeared to be working as FSWs at bars, street corners, and motels to determine their interest and eligibility for the study. Eligibility criteria included: 1) being age ≥18 years; 2) reporting unprotected vaginal or anal sex with a male client in the previous month; 3) reporting injection drug use and sharing syringes/other injection equipment within the past month; 4) able to speak Spanish or English; 5) able to provide informed consent; 6) having no plans to permanently leave the city in the following 18 months; and 7) agreeing to undergo free medical treatment if testing positive for an STI. Sex work was operationalized as engaging in vaginal or anal intercourse in exchange for something else (e.g., money, drugs, gifts, shelter).

2.2 Qualitative Interview Sampling

We recruited 47 women from the parent study's Tijuana site into a qualitative sub-study about migration, sex work, and drug use. We employed a criterion sampling approach in order to obtain a diverse sample (Patton, 1990). First, we generated a list of possible participants enrolled in the parent study through July 31, 2009 (n=179). Next, we sorted the list to assess the number of potential participants by birth state. Based on the resulting sample sizes and Mexico's official substance use statistics (Instituto Nacional de Salud Pública, 2009), we aggregated states into three regions (i.e., Baja California (n=16), other northern states (n=16), and central-southern states (n=15)) and recruited equally from each to ensure geographic diversity. The Institutional Review Board at the University of California, San Diego, approved the study protocols. All participants provided voluntary written informed consent and were reimbursed $20 USD for their time. Refreshments were provided.

2.3 Qualitative Interviews

Trained bilingual interviewers (the principal investigator [PI] and two research assistants [RAs]) conducted digitally recorded interviews lasting 30 to 90 minutes in private rooms in the parent study's storefront office in Tijuana's *Zona Roja* (red light district). Participants were interviewed once, in English or Spanish, depending on their preference. Interview questions elicited lifetime drug use, sex work, and migration histories. Women answered questions such as "*Tell me about the first time you injected drugs*."; "*Can you tell me what happened the first time you traded sex?*"; "*How have drugs affected your life*?"; "*At any time, did you use rehabilitation services for substance abuse*?"; and "*How would you like your life to be in the next year*?" We reached saturation of themes when similar stories with minor variations were recounted (Guest, Bunce, & Johnson, 2006; Morse, 1995). Data on social support in relation to drug use and recovery efforts constituted emergent themes identified throughout data analysis procedures and did not constitute a topic included in the interview guide.

2.4 Data Analysis

Interviews were transcribed and analyzed in the language of the interview, preserving the participants' use of English and Spanish and drug-culture terminology. English translations

of participants' quotes are provided. The first author assigned pseudonyms to protect participants' confidentiality. The interview guide enabled us to determine codes around migration, drug use, and sex work a-priori. The PI and RAs independently applied these codes to six interviews by hand, adding new "open codes" (e.g., current relationships with intimate partners and family) as necessary. Differences in coding were reconciled during an in-person meeting (Corbin & Strauss, 2008). The final coding scheme was applied to all transcripts by the first author, who met with the PI weekly to ensure coding reliability. Inter-rater reliability during the coding process was not assessed since the coding was done by the lead author to ensure consistency in the application of the codes. However, steps were taken to maximize consistency in the application of the coding scheme through extensive meetings between the research assistant and the principal investigator.

After initial coding, we isolated portions of the transcripts coded for the following topics: sexual partners; rehabilitation; rehabilitation and peers, sex and drug partners, and family; past/current family structure; current relationships with intimate partners/family; recovery issues; future family reunification or drug rehabilitation goals; separation from family/social networks; and impact of addiction. Subsequently, we performed axial coding to determine relationships between codes and themes (Corbin & Strauss, 2008; Kendall, 1999). We categorized data into four types of drug use and recovery-oriented social support influences (i.e., negative; positive; conflicting; problematic support). Positive support promotes recovery, while negative support is related to continued or increased drug use, or relapse. Conflicting support refers to the provision of positive and negative support; problematic support refers to social support intended to be helpful, but which produces a negative outcome (Revenson, Schiaffino, Majerovitz, & Gibofsky, 1991). We identified two social support subtypes of positive and negative social support: *instrumental support*, (i.e., providing resources such as housing, money, food, other services) and *emotional support* (i.e., providing empathy, trust, love, caring, companionship) (Berkman et al., 2000; House, 1981). Participants' characteristics, recovery experiences, social networks and support providers are described. The number of participants who discussed a particular type of support is noted. We used ATLAS.ti, a qualitative data analysis software package, to code and manage the data (Muhr & Friese, 2004).

3. Results

3.1 Participant Characteristics

Participants ranged in age from 23-54 years, with a mean of 36. On average, drug use began at age 17, sex work at age 21, and injecting drugs at age 22. Women generally traded sex for money, primarily to purchase drugs, and some exchanged sex for drugs. Women also used earnings to pay for housing, food, supporting intimate partners, and less frequently, to support children or parents. Women who had recently reduced their drug use (n=7) mentioned engaging in sex work less often. Most women identified as independent street-based sex workers at the time of interview. Some women had also danced/performed at bars and clubs, or worked in brothels. No participant reported currently having a pimp, although several women discussed being prostituted by intimate partners in the past, or currently supporting a partner via sex work. Despite the existence of a system for sex worker registration and STI testing in Tijuana's red light district, no participant held a sex worker permit, although some had been registered previously. Registration is known to be low among street-based drug using women in Tijuana (Sirotin et al., 2010). Participants reported earning less than other kinds of sex workers, attributing this to injection drug use stigma and reduced negotiating power with clients due to *lamalilla* (i.e., withdrawal).

3.2 Recovery Experiences and Aspirations

The majority of FSW-IDUs (94%; n=43) attempted recovery at least once. Half of participants (n=23) discussed attempting recovery when asked about future plans, while three women declared no desire to stop using drugs. Participants utilized varied drug treatment strategies including inpatient and outpatient rehabilitation services (e.g., 12-step programs), methadone maintenance, prescription drugs, other illicit drugs, and weaning themselves off drugs. Luisa, 41, has injected heroin since her late teens when her ex-husband forcibly injected her. She discussed her feelings about recovery: "I don't want to be sticking myself with a needle every couple hours; what I want now is to stop using, I'm finally tired of it, I'm sick of it." Mayte, 32, has injected heroin since age 15 and believed entering methadone treatment helped her recover, because she no longer injected heroin or traded sex, and instead worked in a family business: "…recently I got myself into a treatment called methadone; I got myself in there so I wouldn't be sticking myself with a needle… from what I see I'm doing well, because now I'm working [selling clothes]." Although injected heroin was the most commonly used drug, women also used methamphetamine and marijuana. Prescription drugs were sometimes consumed with the intent of substituting, reducing or eliminating injection heroin use.

3.3 Personal Networks and Support Providers

Women's personal networks primarily included family members (e.g., parents, siblings, children, extended family) and intimate partners. Friends, other sex workers and IDUs, clients, and drug rehabilitation program staff were mentioned infrequently, although participants were not probed about these contacts. Women maintained contact with ~2 relatives (range: 0-8 persons), including children and an intimate partner. Many participants with active family relationships were from northern Mexican states or had relatives living in or near Tijuana, including in southern California. Half of FSW-IDUs were in an intimate relationship (n=25, 53%) at the time of interview. Several participants (n=7, 15%) discussed family drug use by parents, siblings, and children, and nearly all (46) women reported ever having a drug-using partner.

3.4 Social Support and Drug Use

Illustrative quotes of positive, negative, conflicting, and problematic social support are provided in Tables 1 through 4; social support is also categorized as instrumental or emotional support. We describe the manner in which participants connected support to recovery. Notably, some participants' personal network members provided various types of social support concurrently.

3.4.1 Positive Support—Family and intimate partners provided positive instrumental and emotional support to promote participants' substance abuse recovery. Positive instrumental support which participants believed helped their recovery efforts included direct financial support or services, such as paying for treatment, and providing or sharing housing and childcare responsibilities. Women described positive emotional support as a combination of emotional support directly related to recovery, which included visitation while in rehabilitation centers, providing encouragement or motivation for recovery, and more general emotional support, such as respect, trust, love, inclusion in family events, companionship.

Positive Instrumental Support: Quotes from Luisa, Carmen, and Ana illustrate different types of positive instrumental support in Table 1. Participants viewed financial, housing, and childcare support as critical to recovering and returning to a "normal" drug-free life. Non-drug using family members' instrumental support motivated participants' recovery efforts,

increased women's opportunities to pursue recovery, and reduced temptation to relapse. Drug-using partners who also sought sobriety also provided instrumental support by paying for drug treatment services or shared housing, and by promoting a climate of reduced drug use.

Several women (n=8) reported that family members or partners paid or offered to pay drug rehabilitation program fees. This assistance encouraged participants to attempt recovery while simultaneously removing financial barriers to costly treatment. Luisa's son offered to pay for an inpatient rehabilitation program in a nearby city; she conditioned her acceptance on receiving family visits. Multiple types of positive support were provided concurrently: financial support for her recovery treatment in a center outside Tijuana was complemented by family emotional support.

Several women (n=4) shared housing with family and partners to improve adherence to a particular recovery strategy. Participants believed that family housing arrangements created a supportive environment that discouraged drug use and sex work, while simultaneously distancing them from neighborhoods of drug use. Carmen, 38, was forcibly injected with heroin by a boyfriend at age 28, and is HIV-positive. Several years ago, she and her children briefly returned to her mother's house outside Tijuana; while there, she quit heroin because it was unavailable. Several (n=4) women associated housing support and recovery with exiting Tijuana's drug scene; if drugs were unavailable, temptation and relapse were less likely.

Family members often assumed custody of FSW-IDUs' children, preventing intervention by child welfare agencies. Formal or informal child custody arrangements with family motivated some women's recovery efforts, as they planned to eventually resume caring for their children. When probed about future plans, Ana, 30, described childcare arrangements with her sister, and assuming custody after attaining sobriety. Ana associates her sister's provision of childcare, a form of instrumental support, with recovery because resuming custody for her children is contingent on sustained sobriety. This arrangement has served as an important incentive, which Ana describes as motivating her recovery intentions. However, at the time of the interview she had not reduced her drug consumption. Similar family-based childcare arrangements conditional on future sobriety emerged in twelve other interviews.

Positive Emotional Support: Participants indicated that positive emotional support, whether directly related to promoting recovery or general expressions of caring and inclusion, improved their recovery goals. Quotes exemplifying types of emotional support received are provided in Table 1. Several participants reported an increased desire to recover but had not yet initiated a recovery strategy; in contrast, other participants' comments implied that perceived emotional support helped them reduce or stop injecting. Visits from family members while participants were in rehabilitation centers were mentioned by four women as a form of emotional support, which influenced them to work towards sobriety. Alicia, 31, began injecting heroin at 15 and trading sex at 16. Alicia explained how it was important to her that her father saw that she was doing well because he was the most supportive. This was echoed in other interviews, where visitation was a form of positive emotional support, and receiving no visits discouraged participants.

Drug-using and drug-free intimate partners provided different types of positive emotional support. Drug-free partners supported three participants' recovery efforts by encouraging them to reduce consumption or enter treatment. Drug-using partners, who were also trying to recover, offered companionship when obtaining drug treatment services. Nayeli, 31, relapsed at age 25 after being deported to Tijuana. She and her partner were HIV positive

and tried to stay sober while raising their HIV-negative son. Nayeli and her partner sought drug treatment services together and she attributed their success to his support. Nayeli's partner provided emotional support through companionship and encouragement in recovery, and instrumental support by tending to her and "keeping house" while she was in withdrawal. Several (n=7) other participants discussed entering treatment with partners for mutual support; some wished they had a partner to quit with, or that their drug-using partner shared their recovery goals.

Perceived social support and influence is not always directly and tangibly provided (Berkman et al., 2000). Participants perceived emotional support for their recovery, albeit from family members with whom they had limited contact due to distance or estrangement. Several (n=5) participants discussed how perceived actual or potential emotional support incentivized recovery efforts. In Table 1, Luisa cites receiving emotional support in the form of respect and love from her children, despite limited contact, as she prepares to enter a rehabilitation center, which her eldest son will pay for.

3.4.2 Negative Support—Negative instrumental and emotional support, enabling, or otherwise unsupportive behavior affected recovery efforts by encouraging maintained or increased drug use, or contributing to relapse. Quotes exemplifying negative support can be seen in Table 2. Intimate partners offered negative instrumental support by giving drugs, money to purchase drugs, or injection assistance. Negative emotional support included discouraging entry into drug treatment, using drugs with the participant (i.e., drug use companionship), or exposing women to drug use during periods of abstinence, which increased temptation for relapse. Sometimes having a drug-using partner or family member as a primary provider of emotional support eroded recovery efforts.

Negative instrumental support: Intimate partners often provided negative instrumental support in the form of drugs or money to buy drugs, injecting assistance, and financial support for food and housing—these resources permitted four women to use drugs. These conditions lessened women's desire to attain sobriety. Recovery became more appealing if intimate partners' negative support was removed. Perla, 34, began injecting heroin after seeing her clients consume drugs. Recently abandoned by a partner who provided drugs and injected her, Perla's lack of expertise in self-injecting has resulted in lengthy injection episodes, infections, and heightened withdrawal symptoms, making drug use difficult and painful. Perla sought sobriety in the absence of her partner's drug injection assistance, largely because she was unable to effectively inject herself.

Negative Emotional Support: In five cases, drug-using family members and partners provided negative emotional support, perpetuating women's drug use. Valentina, 45, began injecting drugs after being deported to Tijuana at age 37. Now clean and living in a shelter for HIV positive women, Valentina described how her ex-partner's drug use prevented her recovery and facilitated relapse through a combination of unsupportive behaviors (i.e., continued access and exposure to injected drugs). Other participants' descriptions of negative emotional support varied from subtle influence to direct encouragement of continued drug use. Participants who discussed current or past relationships with drug-using partners indicated that attaining sobriety was difficult when emotional support was contingent on using drugs with a loved one, or when drug use activities had increased intimacy between partners.

3.4.3 Conflicting Support—A few participants reported conflicting support, defined as positive and negative support received from one person. Quotes exemplifying conflicting support can be found in Table 3. In three participants' relationships, partners purchased drugs as part of a larger "package" of support for housing and living costs. Rosi, 39, who

began injecting and selling heroin and cocaine at age 12 while living in California, appreciatively described the housing, food, clothes, and drugs provided by her partner who was incarcerated and could no longer support her. Rosi described her partner as a good partner, based on his ability to financially support her living expenses and drug use costs, which she gave the same importance as food and rent. In the absence of this financial support, Rosi was working towards sobriety and had stopped engaging in sex work. Most participants with a drug-using partner cohabitated and used drugs with that person. Women described a range of financial arrangements: some partners shouldered the couple's living expenses, others shared expenses, and some women financially supported their partner.

There were two salient cases where women received conflicting support from their partner due to jealousy resulting from engaging in sex work (Table 3). Itzia, 40, has injected drugs in Tijuana since age 25. Itzia's non-drug-using partner in Tijuana gave her money for drugs *and* recovery treatment, providing conflicting positive and negative instrumental support. Itzia's partner did not intend to change her drug use, but provided conflicting financial support that contributed to her continued drug use. She defined the relationship between his support and her drug use as a function of her partner's desire to prevent her from trading sex with other men. Other participants reported that their partners would purchase drugs for them to keep them at home.

Elena and Luz's account illustrates the nuanced support that drug-using partners provide each other, which promotes recovery and can prolong drug use. Although same-sex relationships were rarely reported, two participants were in a relationship. Elena, 42, began injecting heroin in Tijuana at age 35. She was mostly homebound because of chronic health conditions. Her partner, Luz, 41 and also an IDU, financially supported Elena by working as a shoe shiner and sex worker with male clients. While both wanted to recover, Luz provided financial resources (i.e., a form of instrumental support) to keep Elena at home, away from areas of sex work and drug use during bouts of poor health. Luz also lowered her partner's heroin dose to reduce discomfort from withdrawal and aid recovery. This example illustrates the co-occurring provision of financial and housing support among substance-using couples; other participants in our study identified these forms of instrumental support. The controlled reduction of heroin administration as a type of recovery support was unique to this couple. As Elena attempted recovery, the support Luz provided may have impeded Luz's own recovery. Conflicting support was identified among women in a relationship, a finding possibly due to the intersection of sex work, drug use, relationship dynamics (e.g., jealousy) and gender role expectations.

3.4.4 Problematic Support—Somewomen's narratives (n=5) exemplified problematic social support, whereby well-intended positive support has unintended negative effects (Table 4). Problematic support emerged in situations where relationships with support providers were previously strained, and participants experienced guilt or shame upon receiving more positive support. This guilt and shame induced stress, which sometimes drove participants to relapse. Mayte's (32 years old) experience with her family's involvement in her recovery efforts is illustrative of problematic support. Mayte was reportedly sober at the time of interview, and described receiving support at a greater level than that reported by other participants. Mayte's family provided her with housing but this support proved problematic because it generated conflict between her stepbrother and stepfather. Mayte was left alone in the house throughout the day, which made her bored and lonely. Despite receiving this well-intended instrumental support, emotional discomfort and loneliness prompted Mayte to leave her mother's house and relapse. After several months on the street, she moved in with her brother and achieved sobriety. Her brother's housing support did not generate family conflict, and did not elicit guilt or loneliness from Mayte. However, she expressed guilt for relapsing in spite of her family's support, even though she

acknowledges that the support she received in her mother's house was problematic. Similarly, another woman reported that shared housing can be problematic if they feel emotionally uncomfortable, lonely or bored, experience withdrawal symptoms, or if drugs are available nearby, which may lead them to "go out to the street" seeking drugs. Positive support perceived by participants to be condescending elicited negative resentful reactions from two participants. This also led to isolation or limited the extent to which the participants benefited from positive support.

Several women felt guilt and shame in response to positive emotional support received from family members, reducing the risk of achieving sobriety. Sometimes positive emotional support produced negative effects: some participants believed that feelings of guilt and shame increased their stress level, thereby resulting in increased drug use or relapse to cope with that stress. Sometimes, shame or guilt led women to isolate themselves from their families and other sources of positive social support. Diana, age 23, felt guilty about receiving emotional support from her family, despite previously stealing from them. Diana's family once held a birthday party at the treatment center where she was enrolled. Yet she distanced herself from her family and relapsed due to feelings of guilt and shame. Diana emphasized her family's visit and the party held in her honor, which signified emotional support for her recovery through acceptance, caring and social inclusion, despite illegal behaviors. However, this support elicited guilt, preventing her from benefiting from her family's support. Self-imposed isolation from supportive family members, already described as a limiting factor for positive emotional support, was also categorized as problematic support. Lucia, 33, began injecting heroin at age 17 and taking clients for sex work at age 19 to support her habit. She discusses her desire to lessen her children's embarrassment of her, referring to sex work for drugs as self-humiliation, and commenting extensively on her appearance, which has been diminished by drug use (e.g., losing teeth, weight loss, premature aging). Several women (n=6) avoided their families, especially children, due to shame because they did not want to be seen as "drug addicts". Other women talked about being underweight, dirty, homeless, needing to engage in sex work, and wearing revealing clothes for sex work as characteristics that drove feelings of shame about their drug use. However, some participants' relationships spanned a continuum from having no contact with their children to resuming a "normal" relationship, including mutual provision of social support, which motivated recovery efforts.

4. Discussion

This study explored types and sources of social support and how they influence recovery motivation and outcomes for Mexican FSW-IDUs, an understudied and vulnerable population. We highlight issues of negative, conflicting, and problematic support, which may contribute to poor recovery outcomes, and explore family-based social support in depth. The literature on social support for FSWs has involved venue managers, peers, NGOs, and clients or regular partners as influencing condom negotiation and use (Cheng & Mak, 2010; Dandona et al., 2005; Swendeman, Basu, Das, Jana, & Rotheram-Borus, 2010; Yang, Xia, Li, Latkin, & Celentano, 2010; Urada et al., 2012). However, although much has been done on substance use and negative social support in the general treatment population, little is understood about the dynamics of social support among FSW-IDU. Findings of this research indicate further study is needed on how positive social support may backfire and what types of interventions may be tailored to this population at dual risk for HIV (i.e., sexual and drug-related), especially addressing the role of shame and guilt for this population.

Participants gave importance to recovery motivation, strategies, and experiences, as half of the participants declared substance abuse recovery as a goal in the coming year, and nearly

all had ever attempted recovery. While FSW-IDUs are often thought to be more socially isolated than female drug users, our results reaffirmed prior studies which find that despite strained relationships and fewer contacts, FSW-IDUs may draw multiple types of support from diverse sources, which can aid or hinder recovery, similar to other female drug-using populations (el-Bassel & Schilling, 1994; Falkin & Strauss, 2003; O'Dell et al., 1998; Strauss & Falkin, 2001). Drug-using social networks often enable drug use, thereby increasing women's risk of drug use, while non-drug-using social networks may discourage risky drug use (Granfield & Cloud, 2001; Latkin, Hua, & Forman, 2003; Latkin, Knowlton, Hoover, & Mandell, 1999; McDonald, Griffin, Kolodziej, Fitzmaurice, & Weiss, 2011; Wenzel et al., 2009).

Often, IDU partners who did not share women's recovery goals provided negative support, enabling women's drug use; non-IDU partners and IDU partners who wished to recover provided positive support for participants' recovery. This finding is reinforced by studies of drug using partners who manifest caring by working together to obtain drugs or conversely, entering rehabilitation services together (Simmons, 2006; Simmons & Singer, 2006). Our data suggested that regardless of drug-use status, intimate partners may have provided conflicting positive and negative support (e.g., simultaneous financial support for housing and drug purchases). Less commonly, resources were provided in order to prevent participants from engaging in sex work to obtain drugs or to keep participants at home to care for children. Sex work may influence relationship dynamics such as jealousy and gender role expectations, and may cause conflicting provision of drug-related social support from intimate partners (Falkin & Strauss, 2003; Nelson-Zlupko, Kauffman, & Dore, 1995). Additional research is needed to better understand the connection between social support provided by intimate partners and sex work in this population.

In our study population, problematic support was observed when positive support was provided by non-drug-using family members in the context of shared housing or strained family relationships. This contrasts with conflicting support, which was generally provided by intimate partners. Feelings of guilt and shame elicited by positive support may be rooted in stigma surrounding drug use, past transgressions related to addiction (e.g., stealing), or conflict between network members. Strained or exhausted family relationships may be common, as recovery from heroin use may require multiple attempts, and families may stigmatize injection drug use and sex work (Dunlap & Johnson, 1992; Granfield & Cloud, 2001; Stockman & Strathdee, 2010; United Nations Office on Drugs and Crime, 2009; Weeks et al., 1998). Participants discussed how feelings of shame and self-isolation were often propelled by thoughts of the embarrassment of their children knowing that their mother was using drugs and trading sex. Drug-using women may struggle to reconcile their lives as drug users with their roles as mothers, eliciting feelings of guilt about relationships with children (Hardesty & Black, 1999; Radcliffe, 2011). These emotional reactions to social support induced stress in some participants. Stress has been linked to relapse among individuals pursuing recovery, but social support has long been thought to buffer stress to improve health outcomes (House, 1981; Sinha, 2001). More research is needed to determine how problematic support (i.e., stress-inducing) develops, and how it can be mitigated.

Social and structural factors, such as poverty, stigma, limited access to quality and evidence-based rehabilitation services, migration and deportation, and drug use environments in Tijuana may determine characteristics of participants' personal networks and the type and level of social support that FSW-IDUs receive. Certain types of FSWs (e.g., streetwalkers) may face severe social marginalization, low socioeconomic status, and increased risk of abuse and illness (Weitzer, 2009). Among FSW-IDUs who maintain family ties, sharing family housing (vs. sober-living facilities) during and post-recovery may be common due to a lack of rehabilitation services in Mexico or fear of mistreatment in available facilities

(Borges et al., 2006; Syvertsen et al., 2010). While some inpatient recovery services in Mexico are provided at low/no cost, or in return for labor, other services such as mandatory inpatient or methadone maintenance treatment may be prohibitively costly for FSW-IDUs or their families, who are made to bear the costs under Mexican laws regarding drug-related infractions (Syvertsen et al., 2010). Many participants reported initiating drug use while living in the U.S. or after being deported, and also discussed the pervasiveness of drug use in certain neighborhoods of Tijuana. Further research is necessary to understand how the confluence of these interpersonal and social-structural factors contributes to social support and recovery among FSW-IDUs.

Our results may be considered in light of several limitations. Our study focuses on FSW-IDUs residing in Tijuana, given the acute sub-epidemic of HIV in high-risk border populations and thus, may not be generalizable to all FSWs or FSW-IDUs in Mexico (Strathdee & Magis-Rodriguez, 2008). However, we interviewed a large sample (n=47) of women of various ages from throughout Mexico, suggesting that social support is a significant concern that influences their drug use and recovery attempts. Our study did not collect data on FSW-IDUs' social networks. Data on the structure, composition and types of support provided by FSW-IDUs' network members can inform our understanding on potential interventions that may be useful at a network level. The migration-focused study from which the data for this paper were drawn was not designed to collect information about social support received, thus, the forms and types of social support received may have been under-reported. Distance from family may shape network characteristics and the quality of their relationships; women with active family relationships or who live near relatives may be over represented. Never the less, the pervasiveness of this emergent topic across many interviews reflects the importance of recovery to FSW-IDUs and suggests that women are acutely aware of the influence that others, including the resources provided, have on their drug use and recovery goals. Family members or intimate partners were not described as sources of other types of social support (i.e., *informational support*- providing information to help an individual overcome challenges; and *appraisal support*-providing information to allow an individual to make a social comparison) (Berkman et al., 2000; House, 1981). Future studies should systematically examine the various types and sources of social support received by FSW-IDUs, in order to identify factors that may impede or support women's recovery. While we lacked detailed data on the role of migration on access to social support networks among FSW-IDUs seeking sobriety, our data suggest that this is an important topic to investigate as migrant FSW-IDUs, including deportees, may be far removed from their immediate families and other sources of support, which may pose a challenge to achieving their goals.

Our data suggest that recovery interventions may consider promoting the formation or strengthening of positive support networks, reducing or limiting negative support networks, and developing strategies to mitigate conflicting and problematic support. Findings from this study suggest that interventions targeting FSW-IDU can benefit from involving intimate partners and family members (Ulibarri, Strathdee, Patterson, 2010). Moving beyond HIV prevention interventions to include substance use treatment and the physical and social risk environment of substance users is needed (Shannon et al., 2011). Interventions using non-confrontational motivational therapies to encourage drug-using male partners of recovering pregnant patients to enter recovery programs have been shown to lower heroin use in male partners, and increase social support for recovering women (Jones, Tuten & O'Grady, 2011). A harm reduction approach with substance users may be necessary to reduce the effects of negative support networks (Maher et al., 2011). Working with positive, but problematic support networks to reduce guilt, shame, and isolation by incorporating therapy and co-dependency 12-step treatment models (Davey-Rothwell, Kuramoto, & Latkin, 2008) and family therapy (Liddle & Dakof, 1995) specifically designed for FSW-IDU into couples

and family interventions can be effective in resource poor settings. Family therapy may help resolve problematic support, and may improve mother-child relationships, an important goal contingent on sobriety for nearly one-third of our participants. Interventions that involved drug usingwomen's children and encouraged giving and receiving social support have been considered successful (Coyer, 2003; Hardesty & Black, 1999; Liddle & Dakof, 1995; Sword et al., 2009). These interventions may encourage increased "recovery capital" (i.e., recovery-related social support, religious affiliation, peer support group membership, life meaning, spirituality), which may provide coping and stress management techniques (Arevalo, Prado, & Amaro, 2008; Laudet & White, 2008). Peer support has been noted as especially effective in reducing sexual risk among FSWs in other national settings (Morisky et al., 2012; Urada et al., 2012). These diverse strategies should be explored systematically within the context of recovery interventions that target Mexican FSW-IDUs in order to produce an empirically based recovery intervention toolkit that meets the needs of this population. Further study is needed on the role of peer support in instigating or maintaining substance use in this population and on factors that may distinguish between positive and problematic support.

Mexico's recent decriminalization of illicit drugs and policy to increase recovery services represents an opportunity for practitioners to more fully address social support issues within substance use recovery interventions for Mexican FSW-IDUs. Such efforts may aid in improving substance abuse treatment by addressing the sociocultural and contextual determinants of substance abuse, and understanding challenges to uptake, retention, and completion of treatment (Alegria et al., 2006). Improved recovery interventions may aid in containing and reducing the HIV epidemic among this vulnerable high-risk population in the U.S.-Mexico border region (Strathdee & Magis-Rodriguez, 2008).

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Table 1

Categories, Themes and Exemplary Quotes of Positive Recovery-related Support among Tijuana female sex workers who inject drugs (FSW-IDUs), 2009 (n=47)

Positive Support Type	Participant	Themes	Quote
Instrumental	Luisa, 41	Financial support for recovery program Exiting drug use environment	*"My son wants to take me to [border town], that I go get enrolled [at a recovery facility] there, so my family can go see me, because that's where my whole family is… I don't want them to just leave me there… And he said that wouldn't happen, that he would talk to my sisters so that they would visit me."*
	Carmen, 38	Exiting drug use environment Housing support	*"Being with my mother, there, it's a different thing, there aren't vices, and there are no drugs… I wasn't using anything"*
	Ana, 30	Childcare support Custody of children contingent on sobriety	*"First [my plan] is to get sober, be okay off drugs, to be with my kids more… [My sister will] give [my kids] back to me, she says "first you have to show me with your actions, not just because you've been clean a month will I give them back to you, you have to get through some time, so I see you want to change for me to give them to you."*
Emotional	Alicia, 31	Family members visiting rehabilitation center	*"[In one rehabilitation center] when I wasn't on drugs I felt better, I was a little fat, big cheeks, and they let me go out. My older sister would come and visit me at the center, it made her happy to see me, my mom saw that I was looking good, that didn't matter as much to me but my dad, when he would go, I wanted him to see how good I looked, because it was my dad who always supported me the most.*
	Nayeli, 31	Entering recovery with partner for mutual support Caring, encouragement	*"[When I had withdrawal] he did the washing, the ironing, he cleaned up the room… three days in the center the withdrawal hit me, and I told him 'you know what, let's get out of here, this center, we're done with it,' The truth was I wanted to get high again. [He told me] 'Are you crazy? You're crazy, because we went to the center for a reason!'… And we're still there [at the center]… we've been there four months."*
	Luisa, 41	Respect, love Perceived support despite little contact	*"Right now I almost never talk to [my children], I mean, it's not good the example I'm setting for them, but they don't hold that against me, they respect me a lot, and they love me… in comparison with other women and their children, I've seen that they respect me a lot… And I love them very much too."*

Table 2

Categories, Themes and Exemplary Quotes of Negative Recovery-related Support among Tijuana female sex workers who inject drugs (FSW-IDUs), 2009 (n=47)

Negative Support Type	Participant	Themes	Quote
Instrumental	Perla, 34	Help injecting drugs	*"…Even though he saw that I worked, he bought me drugs, but he started hanging out with another girl, and I think he shares his money with her now…now he doesn't want [to see me]. [He says] 'No, no, no, look for someone or pay someone else to inject you, because I can't'… I won't beg him, but I try to [inject] myself and it takes me up to an hour to dose myself, and since I was already in withdrawal, I felt really bad."*
	Additional quotes	Partners paying for drugs	*"I used to [have sex with other guys for money]… (Interviewer: When did that stop?) When I got sick this last time… he took care of me. I feel bad, you know, going out. (Interviewer: If you need a dosage of drugs?)… He'll bring it to me."* *"[If it could actually happen, [in the next year my life would be] without drugs, with my son by my side, and a man that I love, because if you don't love him, that's the problem with the guy I'm with right now, I just don't love him. He's a lot older than my, and its really not for anything more than the drugs that I'm with him. If you think about it, almost all the guys I've been with, it was just for the drugs, that is, I've never actually loved any of them.*
Emotional	Valentina, 45	Failure of mutual recovery support Drug use as intimacy building in relationships Unsupportive, tempting or enabling behavior	*"He influenced my consumption of heroin a lot. I don't blame my partners, but yes, it does reverberate, it does influence… it's impossible to be with a person who is using and not want to use too…in the course of the seven or eight years that I've had this heroin addiction, here along the border, I've tried various times to stop using, with my partner who I had until recently. We would both get enrolled [in an inpatient treatment facility], and he would start using again, almost always he would start consuming again first and then later I would, to be with him in the way we had always enjoyed-high."*
	Additional quotes	Partner does not want to get clean Drug-using family members tempt relapse	*"[The rehabilitation centers,] well yeah, they work, its just that my partner didn't want to go, and since he was using drugs and I wasn't, well, seeing it makes you want to do it to."* *"I relapse [once I get clean] because I find it out there, all around, I don't find motivation. My sister is a heroin addict, and my other sister has her own life away from all this, I don't know, all alone you can't do it.*

Table 3

Categories, Themes and Exemplary Quotes of Conflicting Recovery-related Support among Tijuana female sex workers who inject drugs (FSW-IDUs), 2009 (n=47)

Participant	Themes	Quote
Rosi, 39	Financial support for housing, food, drugs	*"I give him so much credit, for being a drug addict, he sure did make sure I had a roof over my head, make sure I have food, I have clothes, for reals- I hadn't known any dope fiend, like, no drug addict like him, he is an addict, he is a heroin addict. That motherfucker used to make sure I eat, plus my habit, make sure the rent was paid."*
Itzia, 40	Financial support for drugs or recovery Influence of sex work on partner relationships	*"Interviewer: So, he would give you money for drugs but at the same time he also helped you with treatment?* *Itzia: Yes, he would say I'm going to keep using [drugs] whether he gives me money or not anyway, that I would keep using no matter what, and so that I wouldn't go with another man for drugs [trade sex], it was better if he gave it to me himself, than see me robbing or sneaking around, it would be better that he gave me the money."*
Additional quotes	Providing money for drugs to stop sex work	*Well supposedly [I'm not working as a sex worker], forget about it because [my American boyfriend] tells me 'you go out too much, don't go out on the town… I want you to be my wife, I don't want to see you in prostitution,' like that. So I don't walk around, but if a client pops up while I'm out, I'll do him. But almost always when [my boyfriend] is like that with me, I don't have a need… he gives me money… for the drugs, for food, for the apartment… he helps me with my son when I feed him.*

Table 4

Categories, Themes and Exemplary Quotes of Problematic Recovery-related Support among Tijuana female sex workers who inject drugs (FSW-IDUs), 2009 (n=47)

Participant	Themes	Quote
Mayte, 32	• Emotional Support: caring, encouragement, trust, companionship • Problematic housing situations • Guilt about creating family conflict • Guilt about relapsing	*I felt like I was in the way… one time my stepfather began to say how he didn't trust me, saying 'no, she isn't going to change, she's going to be like that for life… my half-brother, … started arguing with his dad, and I told him, 'no, I didn't tell you that so you would go fight with [the family].' And that was the cause of me leaving the house again…But also [in my mother's] house [I] was lonely, because they all went to work… and I would stay, alone, and I didn't feel good. Then that was the pretext to go out [looking for drugs]. And [now, living] with my brother… when [my brother and his wife] aren't there, the girls [his 2 daughters] are there, and I feel more comfortable… "[My family members] aren't pressuring me because of what has happened, or because they're taking care of me… and even with that [support], coming out of the hospital, I got better, but after about a year, there I go again back to drugs, like a pig to mud….*
Diana, 23	• Emotional support: companionship, caring, forgiveness • Guilt about past transgressions	*"[My family] threw me a birthday party in the [rehabilitation] center, all my family went to see me and they told me that they didn't hold a grudge about what I did, that I stole from them, because I'm their family, understand? … They care for me a lot, but… I feel guilty, ashamed to go home."*
Elena, 42 Luz, 41	• Financial support: to encourage staying home, avoid sex work and drugs • Instrumental support: Administering reduced heroin dose • Support provider struggling to recover	*"We're using very little [heroin] because she wants to get off it too. She's been using longer than me, she's been using since she was 14… I've seen her get sick [withdrawal], its really hard. [We spent] three days in the mixta, in the jail here [in Tijuana], I didn't have [withdrawal] that bad because she was lowering the dosage without telling me…. I thank her for [doing] that… Lately she has been like, 'I am going to go shoe-shine, you stay here, if I have to date somebody I'll date somebody, stay home.'… She'll get mad if she sees me out there, she'll bring me back home. But she's supportive that way."*
Lucia, 33	• Self-isolation from supportive family members due to shame about drug use/sex work	*"It would shame me if my daughters saw me all shriveled up and skinny… I have always tried to keep my daughters well-off, but right now its really hard, so now my goal is to get off the drugs… you humiliate yourself, giving your body away for drugs, for a hit, so I don't want to go on like that, I want a normal life… not to need a hit to be able to get up in the morning."* *"I haven't been able to get out of the drug life yet, even now I tell you [my family] is still watching over me, and they still take care of me, protect me, they still take care of my daughter as if she was one of theres, and it makes me feel angry and impotent, tgat tget treat me like a 16 year old"*
Additional quotes	• Resentment for condescending positive support	*"A lot of men have offered to me- 'I'll help you get away from the drugs!' -but I don't want to leave, I don't want you to take me away (laughs). They offer, to get together with me, offering me a different life… it even bothers me sometimes, it bothers me that they tell me they're going to rescue me…you're already accustomed, you're here, it would be another life, another world that you would have to adapt yourself to… adapting is like being reborn… you're here, always with your drugs, your life, prostitution going on under your roof, saying cuss words, never speaking with respect, it would be like being reborn, coming into a family, sitting there like a nice girl, 'good morning, good afternoon.'".*
	• Shame and self-isolation due to drug use	*"My children live here in Tijuana with my mother but I don't go around them much because I don't want them to be embarrassed by me with their friends."* *"I want to get clean in a rehabilitation center… I want to really learn what love is, and see my daughters more, and that they aren't embarrassed by me."*