

HHS Public Access

Author manuscript *J Drug Issues*. Author manuscript; available in PMC 2021 April 06.

Published in final edited form as:

J Drug Issues. 2019 January 1; 49(1): 15–27. doi:10.1177/0022042618795141.

Risky Sexual Behaviors, Substance Use, and Perceptions of Risky Behaviors Among Criminal Justice Involved Women Who Trade Sex

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Abstract

This study examined risky sexual behaviors, *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*)-defined alcohol and substance use disorders, and perceptions of risky behaviors among community released, justice-involved women, who are currently trading sex (CTS), formerly traded sex (FTS), or have never traded sex. Data were derived from 266 sexually active women recruited from a Municipal Drug Court System in St. Louis, Missouri. In an adjusted multinomial regression model, being dependent on alcohol and cocaine was the most robust correlate of sex-trading status (adjusted odds ratio [AOR]: CTS = 4.21, FTS = 4.66). Perceptions of sexual risk and HIV were significantly associated with CTS (AOR = 3.39), however, not FTS. Other significant correlates of sex trading status included age, lifetime injection drug use, lower education, child sexual abuse, and unstable housing. Gender-specific interventions tailored toward currently and formerly sex-trading women are needed.

Keywords

sex trading; drug dependence; women; criminal justice; sexual behaviors

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Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Ethical Approval

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Introduction

Sex Trading, Substance Use, and Criminal Justice

Sex trading, the act of exchanging sex for resources such as money, food, clothing, shelter, or drugs, is linked with other sexual risk behaviors such as unprotected sex and substance use (Adimora, Schoenbach, Taylor, Khan, & Schwartz, 2011; Dyer et al., 2013; El-Bassel, Wechsberg, & Shaw, 2012; Nehl, Klein, Sterk, & Elifson, 2016; Rudolph, Crawford, Latkin, & Lewis, 2016). Alongside risky sexual behaviors, high levels of self-reported sexually transmitted infections (STIs) and reduced access to needed health services among this population have also been highlighted in the literature (Beckwith, 2010; Covington, 2007; Richie, 2001; Slabbert et al., 2017). Recent findings also suggest that involvement in sex trading may be associated with severe substance use with crack/cocaine being the most common drug of choice reported by sex traders (Jiwatram-Negrón & El-Bassel, 2015; Rash, Burki, Montezuma-Rusca, & Petry, 2016; Schonbrun, Johnson, Anderson, & Stein, 2016). Other risky drug-using practices such as injection drug use have been found to be pervasive among individuals who trade sex (Rogers, Lemstra, & Moraros, 2015).

A particularly underserved group of women who are at elevated risk of involvement in sex trading are those involved in the criminal justice system (Schonbrun et al., 2016; Strathdee et al., 2015). Because the act of sex trading is illegal, and trading sex for drugs is common, sex trading has been linked with worse criminal justice outcomes and a reduced likelihood of achieving abstinence while in substance use programs (Rash et al., 2016; Scott, Grella, Dennis, & Funk, 2014; Staton-Tindall, Harp, Winston, Webster, & Pangburn, 2015). Strathdee and colleagues (2015) found that more females than males reported recent illicit drug use before criminal justice involvement—and conversely, criminal justice involvement may lead to the initiation of drug use or severe drug use and may increase the risk of HIV among women.

In addition to substance use, other risky sexual behaviors, and criminal justice involvement, sex trading is also correlated with adverse childhood experiences (child sexual abuse, disrupted family unit, etc.) as well as other social factors such as a low educational attainment, poverty, a lack of social support, and homelessness or unstable housing (Jenness et al., 2011; Kaestle, 2012; Klatt, Cavner, & Egan, 2014; Martin, Hearst, & Widome, 2010; Peters, Kremling, Bekman, & Caudy, 2012; Schonbrun et al., 2016; Urada, Morisky, Hernandez, & Strathdee, 2013). The association between sex trading and the factors above suggest that sex trading may also serve as a survival mechanism (Sharpe et al., 2012; Urada et al., 2013; Watt, Kimani, Skinner, & Meade, 2016).

Gaps in the Literature

As the number of women involved in the criminal justice system continues to increase dramatically over the years, with the United States encompassing around a third of the world's female prisoners, research aimed at the specific needs of these women is warranted (Saxena, Grella, & Messina, 2016; Strathdee et al., 2015). Specifically, particular attention should be given to sex-trading, drug-using, and criminal justice–involved women released into the community on parole or probation—as such periods may leave women vulnerable to

preincarceration behaviors (Saxena et al., 2016; Strathdee et al., 2015). Overall, there is a need for epidemiologic studies that evaluate the prevalence of substance use and HIV/AIDS risk among women in alternative to incarceration programs (Blankenship, Reinhard, Sherman, & El-Bassel, 2015).

As researchers aim to develop effective behavioral interventions for criminal justiceinvolved women, it is imperative to understand the sexual and drug-using risk among this population. Prior studies have focused on women who are currently sex trading. However, little is understood about the sexual and drug-using behaviors among women who have ceased trading sex. It is essential to assess whether individuals who cease from trading sex have the same odds of engaging in other sexual and drug-using behaviors as individuals who currently trade sex. Such information is needed to inform drug use and HIV/STI prevention programs to ensure comprehensive inclusion of all vulnerable and at-risk populations. As such, the primary aim of this study is to examine Diagnostic and Statistical Manual of Mental Disorders (4th ed.; DSM-IV; American Psychiatric Association, 1994)-defined alcohol and substance use disorders, risky sexual behaviors, and perceptions of those behaviors among community released, criminal justice-involved women, who are currently trading sex (CTS), formerly traded sex (FTS), or have never traded sex. Using the socialecological model as a theoretical framework (Bronfenbrenner, 1977), we also evaluate individual and interpersonal factors such as adverse childhood experiences (child sexual abuse and parental separation), social support, low socioeconomic status (unstable housing and education), and sex-trading status.

We hypothesize the following:

Hypothesis 1: Women who currently trade sex will have significantly higher rates of drug use than women who formerly traded sex but not currently and women who have never traded sex.

Hypothesis 2: Women who currently trade sex will have significantly elevated levels of risky sexual behaviors (e.g., sex under the influence and unprotected sex) than women who formerly traded sex and women who have never traded sex.

Hypothesis 3: Women who currently trade sex will be more likely to report lower education, childhood victimization, current unstable housing, and less social support compared with women who formerly traded sex and those who have never traded sex.

Method

Outreach and Recruitment

Data for this cross-sectional study are derived from the National Institute of Nursing Research (NINR)-funded study Sisters Teaching Options for Prevention (STOP; R01NR09180; principal investigator [PI]: Cottler). The sample was comprised of 319 underserved women recruited from a Municipal Drug Court System in St. Louis, Missouri, between the years 2005 and 2008. These drug court participants were either charged with a drug-related crime such as possession or were deemed to have an underlying substance use issue that led to their criminal justice involvement.

STOP research staff members, who were unaffiliated with the court system, were present at the courts and, with court permission, approached potentially eligible women after they met with the judge of the court and provided them with information on the STOP study (Johnson et al., 2011; Reingle et al., 2013). To be eligible, women had to be at least 18 years of age, under a community supervision program (i.e., parole or probation), intend to remain in the St. Louis area for the next 12 months, and provide informed consent. Women who were interested and eligible were scheduled for a baseline interview and were interviewed about their history of sex trading and other risky sexual behaviors, substance use, and sociodemographic characteristics. The inclusion criteria for this substudy included the general eligibility criteria and being sexually active in the past 4 months, which reduced the sample to 269 women. Because this study evaluated risky sexual and drug-using behaviors among women with drug-related criminal justice involvement, we excluded currently abstinent women as they were not at risk of engaging in risky sexual behaviors. Three additional women refused to report whether they experienced child sexual abuse or ever traded sex and were, thus, excluded from the current analyses, making our final sample size 266 women. The STOP study was approved by the Washington University of St Louis' Institutional Review Board.

Measures

Risky sexual and drug-using behaviors, as well as demographic information, were measured using information from the Washington University–Risk Behavior Assessment (WU-RBA), which was adapted from the National Institute on Drug Abuse (NIDA)'s Risk Behavior Assessment (Shacham & Cottler, 2010; Needle et al., 1995). Risky sexual behaviors assessed by the WU-RBA include sex trading (for food, cash, drugs, and other resources), sex under the influence, types of drugs used during sexual encounters, and perceptions of risk behaviors.

Drug dependence was measured with the Diagnostic Interview Schedule (DIS; Robins et al., 2000), a structured interview based on the *DSM-IV* criteria for abuse of and dependence on various substances, including stimulants, cocaine, cannabis, amphetamine, opioids, and alcohol. Questions asked about patterns of drug use, polysubstance use, the frequency of drug use (yearly, monthly, weekly, daily), and problems related to drug use, as indicators of abuse and dependence.

Sex Trading

Sex-trading status was assessed through a combination of questions: (1) Have you ever traded sex of any kind or "tricked" to get drugs or alcohol? (2) Have you ever traded sex to get (a) cash, (b) food, (c) a place to stay, or (d) clothes? (3) Have you ever traded sex with a police officer? (4) Have you ever had sex with a lawyer in exchange for legal services? Participants who answered "no" to these questions were categorized as never engaging in sex trading. Participants who answered "yes" to one or more of these questions were then asked how many times in the past 4 months they traded sex for the above resources. Participants who answered "0" to these follow-up questions were categorized as women who formerly traded sex, as they endorsed ever sex trading but not in the past 4 months, whereas

participants who answered "yes" to one or more of these follow-up questions were considered women who currently trade sex.

Among those who traded sex in this study, multiple motivations for sex trading were reported. Most of the women reported trading sex for money or drugs or alcohol. Around a third of the women reported trading sex for a place to stay, whereas around one fourth of the women reported trading sex with a police officer, trading sex for clothes, and trading sex for food. A small percentage of women reported trading sex with lawyers (<5%). Based on the responses on the sex-trading measures, we then created a three-level variable to categorize participants as (a) women who currently trade sex (CTS), (b) women who formerly traded sex (FTS), and (c) those who never traded sex.

Statistical Analysis

All analyses were conducted using SAS statistical software 9.4 (SAS Institute Inc., Cary, NC, USA). Chi-square analyses and multinomial logistic regression were used to determine the associations between *DSM-IV* substance and alcohol disorders, risky sexual behaviors, and perceptions of sexual and drug-using behaviors, and sex trading controlling for demographic variables.

Results

Demographics

Of the 266 women in our sample, a majority (66%) reported sex trading in their lifetime (Table 1). Of those, 99 (37%) women reported currently trading sex, 76 (29%) reported formerly trading sex but not currently doing so, whereas 91 (34%) reported that they had never traded sex. Most of the women self-identified as Black (69%), with most non-Black women self-identifying as White. Around one third were currently or previously married (35%) and between 18–29 years of age (30%); nearly half had less than a high school diploma (47%). The majority had unstable housing, such as living with others, a halfway house, or streets (76%), and reported having someone they could go to for advice or favors (78%). Half of the women experienced sexual abuse before the age of 15 (51%), and approximately 70% reported being separated from at least one parent for 6 months (72%) before age 15. Less than one fourth of the women had ever injected drugs (22%).

Bivariate analyses revealed that women who currently trade sex or formerly traded sex were significantly more likely to be older, have less than a high school diploma, report child sexual abuse before the age of 15, have unstable housing, and to have injected drugs than those who never traded sex. These associations typically followed a dose–response pattern, whereas women who currently trade sex had the highest prevalence, followed by those who formerly traded sex, and then those who had never traded sex.

DSM-IV Alcohol and Substance Dependence

The prevalence of *DSM-IV* alcohol and substance dependence was high among our sample, with cocaine (55%) and alcohol dependence (46%) most prevalent (Table 1). Women in the study also met dependence criteria for cannabis (18%), opioids (18%), and amphetamines

(4%). Women who currently or formerly traded sex were significantly more likely to meet the criteria for being alcohol dependent (53% and 55%) and cocaine dependent (74% and 71%) compared with non– sex-trading women (alcohol, 31%; cocaine, 20%).

Sexual Risk and HIV Perceptions

Roughly half the women in our sample agreed that when under the influence of drugs or alcohol, they were more likely to do sexual things that they did not usually do (52%) or that they were less likely stay within their sexual limits (46%; Table 1). A smaller percentage of the women agreed that they were tired of always monitoring their sexual behavior (15%); liked wild, uninhibited sexual encounters (24%); found it difficult to control sexual practices (21%); and the pleasure of skin to skin sex outweighed the threat of HIV (18%). Also, 11% of the women had a low perception of HIV risk, believing that HIV was no longer a threat. Of the women who held these beliefs, women who were currently trading sex were significantly more likely to report participating in atypical sexual activities when under influence of drugs and alcohol, found it difficult to stay within sexual limits when under the influence of drugs and alcohol, were tired of monitoring sexual behavior, and found it difficult to control sexual behavior. An overall index of HIV risk perceptions using items that were significant with sex-trading status was also statistically significant. These statistically significant perceptions also displayed a dose-response relationship with sextrading status, with the highest percentage of endorsement belonging to women who currently traded sex and the lowest belonging to women who reported never trading sex.

Current risky sexual and drug-using behaviors such as inconsistent condom use and sex under the influence were prevalent among the women. Only 9% of the participants reported consistent condom use during sex in the past 4 months, whereas 63% reported using drugs or alcohol before or during sex. Chi-square analyses revealed that women who were currently trading sex were significantly more likely to use drugs before or during sex (<0.0001).

Of the 168 women who reported using drugs or alcohol before or during sex, most used crack/ cocaine (64%) and alcohol (55%; Table 2). Other reported drugs were marijuana (35%), heroin (17%), club drugs (e.g., ecstasy; 8%), amphetamines (5%), and other drugs (3%). Women who never traded sex had statistically higher rates of marijuana and club drug use than women who currently or formerly traded sex, whereas women who currently trade sex had significantly higher rates of crack/ cocaine and heroin use than women who formerly traded sex.

Multinomial Logistic Model Predicting Sex-Trading Status

Table 3 shows the results of the adjusted multinomial logistic regression model predicting sex-trading status. Women who were dependent on alcohol and cocaine, as compared with women who were not, were nearly 5 and 4 times more likely to be women who formerly traded sex (adjusted odds ratio [AOR] = 4.66, confidence interval [CI] = [1.87, 11.60]) or women who currently trade sex (AOR = 4.21, CI = [1.69, 10.52]) than to have never traded sex. As with the sexual risk perception items, *DSM-IV* alcohol and cocaine dependence were combined to reduce multicollinearity in the adjusted model. Women who endorsed two

or more questions assessing perception of sexual risk, compared with women who endorsed less than two, were more than 3 times more likely to be women who currently trade sex than to have never traded sex (AOR = 3.39, CI = [1.64, 6.99]).

Several significant associations between sociodemographic variables and sex-trading status were evident in the adjusted model. Our results showed that younger women, compared with older women, were significantly less likely to engage in current and former sex trading (AOR: CTS = 0.25, CI = [0.12, 0.55]; FTS = 0.28, CI = [0.13, 0.61]), whereas women with less than a high school diploma, compared with women with more education, were significantly more likely to be currently sex trading (AOR: CTS = 2.67, CI = [1.30, 5.47]). Regarding life events, women who experienced child sexual abuse (AOR: CTS = 2.14, CI = [1.06, 4.33]), women who had unstable housing (AOR: CTS = 4.03, CI = [1.71, 9.48]; FTS = 2.61, CI = [1.21, 8.48]) were significantly more likely to have engaged in any sex trading.

Discussion

Risky Sexual and Drug-Using Behaviors and Other Correlates of Sex Trading

In this study, we aimed to understand the differences in risky sexual and drug-using behaviors and social factors between current, former, and non-sex-trading women in the criminal justice system. Consistent with our theoretical framework, the social-ecological model (Bronfenbrenner, 1977), interpersonal and individual factors such as social support, low socioeconomic status (unstable housing and education), and adverse childhood experiences (child sexual abuse and parental separation) were significantly associated with sex-trading status. Specifically, women who were currently trading sex were more likely to report lower education, ever injecting drugs, childhood victimization, and current unstable housing compared with women who formerly traded sex and those who had never traded sex. Women who were currently trading sex were also more aware of their risky sexual behaviors compared with women who formerly traded sex and those who had never traded sex. As sex trading is often used to obtain resources for economically disadvantaged women, these results were expected (Jenness et al., 2011; Martin et al., 2010; Peters et al., 2012; Rash et al., 2016; Urada et al., 2013). Our findings also support literature that associates sex trading and criminal justice involvement with many adverse life events. Specifically, a known pathway into the criminal justice system for women centers on experiencing trauma, which may subsequently lead to substance use as a coping mechanism (Saxena et al., 2016). Consequently, substance use leads to criminal justice involvement as a direct result of use or by engaging in behaviors (e.g., sex trading) linked with substance use (Saxena et al., 2016).

Our hypothesis that women who currently trade sex would have significantly higher rates of drug use than women who formerly traded sex and women who never traded sex was partially supported. Researchers have suggested a potentially cyclical interplay of drug use, whereas substance use may be a coping mechanism for those involved in sex trading; however, sex trading is also used as a mechanism to attain drugs (Dunne et al., 2014; Inciardi & Surratt, 2015; Millay, Satyanarayana, O'Leary, Crecelius, & Cottler, 2009; Watt et al., 2016). In our study, only alcohol dependence and cocaine dependence were

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significantly associated with sex-trading status. Although drug use and risky sexual behaviors are well known to be inextricably linked, our population consisted of women involved in the criminal justice system who had a direct drug-related offense or were deemed to be motivated by substance use when committing a crime. The lack of significant associations between drugs other than crack/cocaine and alcohol may be attributed to the high prevalence of drug use in this population.

Alternatively, crack/cocaine has been previously noted as a drug of choice among sextrading women, which may explain the significant association between cocaine dependence and sex trading among our sample (Gilchrist et al., 2015; Jiwatram-Negrón & El-Bassel, 2015; Rash et al., 2016; Schonbrun et al., 2016). Overall, crack/cocaine was also the most commonly used substance among those who reported substance use during sex in our sample, supporting prior literature that crack/ cocaine is one of the most frequently used illicit substances during sexual encounters (Calsyn et al., 2010). Crack/cocaine use has been linked with not only sex trading but also other high-risk sexual behaviors. These associations have been attributed to a potentially higher cost needed to fund crack/ cocaine use. Research by Deering and colleagues (2011) found a dose–response relationship with increased expenditure on drugs and increased income from sex trading among women.

We also hypothesized that women who were currently trading sex would have higher levels of sexual risk behaviors than women who formerly traded sex and women who have never traded sex; that hypothesis was also supported. Women who currently trade sex were more likely to engage in sex under the influence of drugs or alcohol in the past 4 months, increase their sexual limits when under the influence of drugs and alcohol, tire of always monitoring their sexual behavior, and report very low rates of consistent condom use during sexual encounters in the past 4 months. Our multivariable model further confirms this as women who were currently trading sex had higher odds than women who formerly traded sex and those who never traded sex to endorse at least two or more sexual risk perception items. This finding, that women who currently trade sex were more likely to endorse having difficulty staying within their sexual limits when under the influence of drugs and alcohol, was not surprising as sex trading is linked to other risky sexual behaviors (Gerassi, Jonson-Reid, Plax, & Kaushik, 2016; Jenness et al., 2011; Meyer, Springer, & Altice, 2011).

Of notable importance is that 18% of our sample believed that the pleasure of skin to skin sex outweighed the threat of HIV, and 11% believed that HIV was no longer a threat. This is worth highlighting as our sample is comprised of women with an already elevated risk of HIV due to their sociodemographic characteristics and current drug and sexual behaviors. Moreover, 63% of those who had been sexually active in the last 4 months reported sex under the influence, with only 9% of the sample reporting consistently using a condom in the previous 4 months. These findings illustrate the necessity to intervene in this population to reduce the risk of HIV, STIs, and other health consequences.

Implications of Findings

Our findings support a need for expanded availability and utilization of drug treatment programs and relapse prevention programs that may decrease odds of associated sex trading for drugs (Deering et al., 2011; Gaines et al., 2015; Gilchrist et al., 2015). In an area with

publicly funded methadone programs, Gaines and colleagues (2015) found that receipt of drug treatment services was associated with the cessation of sex trading. Other practical support that can bolster individual-level factors such as employment, job training, and microfinance programs can improve the economic positions of vulnerable women and may

subsequently decrease dependence on sex work for income. Our findings also highlight the need for health service providers to be competent in serving sex-trading and substance-using individuals to ensure that they receive adequate care (Gilchrist et al., 2015). Gaines and colleagues (2015) found that revenue from non–sex-trading sources and access to health care significantly increased the likelihood of sex-trading cessation.

With the high levels of risky sexual behaviors reported, harm-reduction strategies such as condom promotion, HIV pre-and posttest counseling, educational programs, and testing for other STIs are warranted (Bekker et al., 2015). In addition, policy-level factors and police interaction that have also been shown to discourage harm reduction practices should be addressed. Up to 80% of sex-trading individuals report that condoms have been used as evidence against them, have been confiscated from them, or that they simply refuse to have condoms on hand due to fear of police (Decker et al., 2015). Prior analyses on this sample showed that nearly 54% of individuals who reported trading sex with a police officer were promised to evade arrests and other punitive charges if they obliged (Cottler et al., 2014).

Limitations and Strengths

There are several limitations to this study. Participants were not drawn from a random sample, and, therefore, results may not be generalizable to all criminal justice–involved female populations; however, the days in court were chosen randomly. Moreover, our study relied on self-report data on sensitive topics such as child sexual abuse and current sexual behaviors and may be prone to underreporting. Despite these limitations, this study has many strengths, including the enrollment of a heavily understudied population of females and comprehensive assessment of risk behaviors as well as the assessment of *DSM-IV* alcohol and substance use disorders.

Conclusion

Our study suggested that, overall, women involved in the criminal justice system had high rates of substance use and risky sexual behaviors. As research indicates that women involved in the criminal justice system are more likely to have substance use–related problems and higher HIV prevalence but are also less likely to receive HIV prevention interventions and substance use treatment as their male counterparts (Strathdee et al., 2015); these findings support the dire need for these services for such women. Even in drug court settings, prevention efforts aimed at reducing an individual's risk of HIV/AIDS are scarce, though the relationship between drug use and risky sexual behaviors can be synergistic and mutually reinforcing, especially among women who have had prior or continual contact with the criminal justice system (Blankenship et al., 2015; Sherman et al., 2015; Strathdee et al., 2015). However, even among these high-risk women, there was typically a dose–response relationship observed, in which women who were currently trading sex had the riskiest drug and sexual behaviors, followed by women who formerly traded sex, then those who had

never traded sex. Future research on women involved in the criminal justice system should consider the different risk of drug use and risky sexual behaviors in this high-risk group of women. Our findings also suggest that interpersonal and individual factors such as social support, unstable housing, education, and adverse childhood experiences increased the likelihood of trading sex for drugs or various resources in our sample of women. These findings suggest a need for gender-specific and trauma-informed interventions that dualistically address the practical and behavioral health needs of sex-trading, criminal justice–involved women.

Acknowledgments

The authors acknowledge Dr. Catina O'Leary for her essential role in the Sisters Teaching Options for Prevention (STOP) study. The authors also acknowledge all STOP staff and participants.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This study was funded by the Florida Education Fund (Abenaa Acheampong Jones), R01NR09180 (PI: Cottler), and T32DA007292 (Jones AA, PI: Johnson, RM).

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References

- Adimora AA, Schoenbach VJ, Taylor EM, Khan MR, & Schwartz RJ (2011). Concurrent partnerships, nonmonogamous partners, and substance use among women in the United States. American Journal of Public Health, 101, 128–136. [PubMed: 20724694]
- American Psychiatric Association. (2000). Diagnostic and statistical manual of mental disorders (4th ed., text rev.). Washington, DC: Author.
- Bekker LG, Johnson L, Cowan F, Overs C, Besada D, Hillier S, & Cates W (2015). Combination HIV prevention for female sex workers: what is the evidence? The Lancet, 385(9962), 72–87.

Blankenship KM, Reinhard E, Sherman SG, & El-Bassel N (2015). Structural interventions for HIV prevention among women who use drugs: A global perspective. Journal of Acquired Immune Deficiency Syndromes, 69, S140–S145. [PubMed: 25978480]

- Bronfenbrenner U (1977). Toward an experimental ecology of human development. American Psychologist, 32, 513–531.
- Calsyn DA, Cousins SJ, Hatch-Maillette MA, Forcehimes A, Mandler R, Doyle SR, & Woody G (2010). Sex under the influence of drugs or alcohol: Common for men in substance abuse treatment and associated with high-risk sexual behavior. The American Journal on Addictions, 19, 119–127. [PubMed: 20163383]
- Cottler LB, O'leary CC, Nickel KB, Reingle JM, & Isom D (2014). Breaking the blue wall of silence: risk factors for experiencing police sexual misconduct among female offenders. American Journal of Public Health, 104(2), 338–344. [PubMed: 24328629]
- Covington SS (2007). Women and the criminal justice system. Women's Health Issues, 17, 180–182. [PubMed: 17602965]
- Decker MR, Crago AL, Chu SK, Sherman SG, Seshu MS, Buthelezi K, ... Beyrer C (2015). Human rights violations against sex workers: Burden and effect on HIV. The Lancet, 385, 186–199.
- Deering KN, Shoveller J, Tyndall MW, Montaner JS, & Shannon K (2011). The street cost of drugs and drug use patterns: Relationships with sex work income in an urban Canadian setting. Drug and Alcohol Dependence, 118(2–3), 430–436. [PubMed: 21704461]
- Dunne EM, Dyer TP, Khan MR, Cavanaugh CE, Melnikov A, & Latimer WW (2014). HIV prevalence and risk behaviors among African American women who trade sex for drugs versus economic resources. AIDS and Behavior, 18, 1288–1292. [PubMed: 24496649]
- Dyer TP, Regan R, Wilton L, Harawa NT, Wang L, & Shoptaw S (2013). Differences in substance use, psychosocial characteristics and HIV-related sexual risk behavior between black men who have sex with men only (BMSMO) and black men who have sex with men and women (BMSMW) in six US cities. Journal of Urban Health, 90, 1181–1193. [PubMed: 23897039]

El-Bassel N, Wechsberg WM, & Shaw SA (2012). Dual HIV risk and vulnerabilities among women who use or inject drugs: No single prevention strategy is the answer. Current Opinion on HIV and AIDS, 7, 326–331.

- Gaines TL, Urada LA, Martinez G, Goldenberg SM, Rangel G, Reed E, Patterson TL & Strathdee SA (2015). Short-term cessation of sex work and injection drug use: evidence from a recurrent event survival analysis. Addictive Behaviors, 45, 63–69. [PubMed: 25644589]
- Gerassi LB, Jonson-Reid M, Plax K, & Kaushik G (2016). Trading sex for money or compensation: Prevalence and associated characteristics from a sexually transmitted infection (STI) clinic sample. Journal of Aggression, Maltreatment & Trauma, 25, 909–920.
- Gilchrist G, Singleton N, Donmall M, & Jones A (2015). Prevalence and factors associated with sex trading in the year prior to entering treatment for drug misuse in England. Drug and Alcohol Dependence, 152, 116–122. [PubMed: 25998258]
- Inciardi JA, & Surratt HL (2015). Drug use, street crime, and sex-trading among cocaine-dependent women: Implications for public health and criminal justice policy. Journal of Psychoactive Drugs, 33, 379–389.

- Jenness SM, Kobrak P, Wendel T, Neaigus A, Murrill CS, & Hagan H (2011). Patterns of exchange sex and HIV infection in high-risk heterosexual men and women. Journal of Urban Health, 88, 329– 341. [PubMed: 21286827]
- Jiwatram-Negrón T, & El-Bassel N (2015). Correlates of sex trading among drug-involved women in committed intimate relationships: A risk profile. Women's Health Issues, 25, 420–428. [PubMed: 26092746]
- Johnson JE, O'leary CC, Striley CW, Abdallah AB, Bradford S, & Cottler LB (2011). Effects of major depression on crack use and arrests among women in drug court. Addiction, 106, 1279–1286. [PubMed: 21306595]
- Kaestle CE (2012). Selling and buying sex: A longitudinal study of risk and protective factors in adolescence. Prevention Science, 13, 314–322. [PubMed: 22350114]
- Klatt T, Cavner D, & Egan V (2014). Rationalising predictors of child sexual exploitation and sextrading. Child Abuse & Neglect, 38, 252–260. [PubMed: 24070694]
- Martin L, Hearst MO, & Widome R (2010). Meaningful differences: Comparison of adult women who first traded sex as a juvenile versus as an adult. Violence Against Women, 16, 1252–1269. [PubMed: 21097962]
- Meyer JP, Springer SA, & Altice FL (2011). Substance abuse, violence, and HIV in women: A literature review of the syndemic. Journal of Women's Health, 20, 991–1006. doi:10.1089/jwh.2010.2328
- Millay TA, Satyanarayana VA, O'Leary CC, Crecelius R, & Cottler LB (2009). Risky business: Focusstatus analysis of sexual behaviors, drug use and victimization among incarcerated women in St. Louis. Journal of Urban Health, 86, 810–817.
- Needle R, Fisher DG, Weatherby N, Chitwood D, Brown B, Cesari H, ... Braunstein M (1995). Reliability of self-reported HIV risk behaviors of drug users. Psychology of Addictive Behaviors, 9, 242–250.
- Nehl EJ, Klein H, Sterk CE, & Elifson KW (2016). Prediction of HIV sexual risk behaviors among disadvantaged African American adults using a syndemic conceptual framework. AIDS and Behavior, 20, 449–460. [PubMed: 26188618]
- Peters RH, Kremling J, Bekman NM, & Caudy MS (2012). Co-occurring disorders in treatment-based courts: Results of a national survey. Behavioral Sciences & the Law, 30, 800–820. doi:10.1002/ bsl.2024 [PubMed: 22807069]
- Rash CJ, Burki M, Montezuma-Rusca JM, & Petry NM (2016). A retrospective and prospective analysis of trading sex for drugs or money in women substance abuse treatment patients. Drug and Alcohol Dependence, 162, 182–189. [PubMed: 27020748]
- Reingle JM, Striley CW, Small E, Crecelius R, O'Leary CC, & Cottler LB (2013). Can courtroom behavior predict recidivism? An assessment of the Courtroom Behavior Check List for women presenting in drug court. American Journal of Criminal Justice, 38, 520–534.
- Richie BE (2001). Challenges incarcerated women face as they return to their communities: Findings from life history interviews. Crime & Delinquency, 47, 368–389.
- Robins LN, Cottler LB, Bucholz KK, Compton WM, North CS, & Rourke KM (2000). Diagnostic interview schedule for the DSM-IV (DIS-IV). Washington University School of Medicine; St. Louis, MO.
- Rogers MR, Lemstra ME, & Moraros JS (2015). Risk indicators of depressed mood among sex-trade workers and implications for HIV risk behaviour. The Canadian Journal of Psychiatry, 60, 548– 555. [PubMed: 26720823]
- Rudolph AE, Crawford ND, Latkin C, & Lewis CF (2016). Multiplex relationships and HIV: Implications for network-based interventions. AIDS and Behavior, 21, 1219–1227.
- Saxena P, Grella CE, & Messina NP (2016). Continuing care and trauma in women offenders' substance use, psychiatric status, and self-efficacy outcomes. Women & Criminal Justice, 26, 99– 121. [PubMed: 26924891]
- Schonbrun YC, Johnson J, Anderson BJ, & Stein MD (2016). Sex trading among hazardously drinking jailed women. Women & Criminal Justice, 26, 165–179. [PubMed: 28190917]
- Scott CK, Grella CE, Dennis ML, & Funk RR (2014). Predictors of recidivism over 3 years among substance-using women released from jail. Criminal Justice and Behavior, 41(11), 1257–1289.

- Shacham E, & Cottler LB (2010). Sexual behaviors among club drug users: Prevalence and reliability. Archives of Sexual Behavior, 39(6), 1331–1341. [PubMed: 19757011]
- Sharpe T, Voûte C, Rose MA, Cleveland J, Dean HD, & Fenton K (2012). Social determinants of HIV/ AIDS and sexually transmitted diseases among black women: Implications for health equity. Journal of Women's Health, 21, 249–254.
- Sherman SG, Footer K, Illangasekare S, Clark E, Pearson E, & Decker MR (2015). "What makes you think you have special privileges because you are a police officer?" A qualitative exploration of police's role in the risk environment of female sex workers. AIDS Care, 27, 473–480. [PubMed: 25360822]
- Slabbert M, Venter F, Gay C, Roelofsen C, Lalla-Edward S, & Rees H (2017). Sexual and reproductive health outcomes among female sex workers in Johannesburg and Pretoria, South Africa: Recommendations for public health programmes. BMC Public Health, 17, 17–27. [PubMed: 28056895]
- Staton-Tindall M, Harp KL, Winston E, Webster JM, & Pangburn K (2015). Factors associated with recidivism among corrections-based treatment participants in rural and urban areas. Journal of Substance Abuse Treatment, 56, 16–22. [PubMed: 25858761]
- Strathdee SA, West BS, Reed E, Moazan B, Azim T, & Dolan K (2015). Substance use and HIV among female sex workers and female prisoners: Risk environments and implications for prevention, treatment, and policies. Journal of Acquired Immune Deficiency Syndromes, 69, S110–S117. [PubMed: 25978477]
- Urada LA, Morisky DE, Hernandez LI, & Strathdee SA (2013). Social and structural factors associated with consistent condom use among female entertainment workers trading sex in the Philippines. AIDS and Behavior, 17, 523–535. [PubMed: 22223297]
- Watt MH, Kimani SM, Skinner D, & Meade CS (2016). "Nothing is free": A qualitative study of sex trading among methamphetamine users in Cape Town, South Africa. Archives of Sexual Behavior, 45, 923–933. [PubMed: 25567071]

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Characteristics of the Sample by Sex-Trading Status of Women (N= 266).

	Current sex traders	Former sex traders	Never traded sex	Total	
Variables	N = 99 (37%)	$N = 76 \ (29\%)$	N = 91 (34%)	$N = 266 \ (100\%)$	p value
Sociodemographic characteristics					
Black	62 (63%)	56 (74%)	66 (73%)	184 (69%)	.20
Once married	36 (36%)	29 (38%)	28 (31%)	93 (35%)	.57
18–29 years of age	19 (19%)	15 (20%)	45 (49%)	79 (30%)	<.0001
Had social support	76 (77%)	62 (82%)	70 (77%)	208 (78%)	.70
Less than a high school diploma	55 (56%)	35 (46%)	34 (37%)	124 (47%)	.04
Child sexual abuse (before 15)	61 (62%)	40 (52%)	35 (38%)	136 (51%)	<.01
Separated from parents (6+ months during childhood)	76 (77%)	54 (71%)	61 (68%)	191 (72%)	.38
Living with others/halfway house/streets	86 (87%)	62 (82%)	55 (60%)	203 (76%)	<.0001
Ever injected drugs	33 (33%)	18 (24%)	7 (8%)	58 (22%)	<.0001
DSM IV substance dependence					
Alcohol dependence	52 (53%)	42 (55%)	28 (31%)	122 (46%)	<.01
Cannabis dependence	16 (16%)	14 (18%)	19 (21%)	49 (18%)	.70
Amphetamine dependence	7 (7%)	2 (3%)	2 (2%)	11 (4%)	.18
Cocaine dependence	73 (74%)	54 (71%)	18 (20%)	145 (55%)	<.0001
Opioid dependence	24 (24%)	12 (16%)	13 (14%)	49 (18%)	.16
Sexual risk and HIV perceptions					
When high/drunk, more likely to do sexual things that usually do not do	68 (69%)	44 (58%)	26 (29%)	138 (52%)	<.0001
Tired of always monitoring sexual behavior	23 (23%)	10 (13%)	8 (9%)	41 (15%)	.02
When high/drunk, difficult to stay within sexual limits	62 (63%)	37 (49%)	23 (25%)	122 (46%)	<.0001
Like wild, uninhibited sexual encounters	29 (29%)	16 (21%)	20 (22%)	65 (24%)	.36
Believe pleasure of skin to skin sex outweighs HIV threat	16 (16%)	19 (25%)	13 (14%)	48 (18%)	.17
Believe HIV is no longer threat	14 (14%)	11 (14%)	5 (5%)	30 (11%)	.10
Find it difficult to control sexual behavior	29 (29%)	16 (21%)	11 (12%)	56 (21%)	.01
Agree with 2+ perceptions	63 (64%)	37 (49%)	25 (27%)	125 (47%)	<.0001
Sex in past 4 months					
Always use condoms during sex in past 4 months	5 (5%)	5 (6%)	13 (14%)	23 (9%)	.06

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Note. DSM-IV = Diagnostic and Statistical Manual of Mental Disorders (4th ed.).

Table 2.

Types of Drugs Used During Sex in the Past 4 Months (N= 168).

	Currently trading sex	Formerly traded sex	Never traded sex	Total	
Drugs	<i>N</i> = 91 (54%)	<i>N</i> = 31 (18%)	<i>N</i> = 46 (27%)	168 (100%)	p value
Alcohol	46 (51%)	18 (58%)	29 (63%)	93 (55%)	.36
Marijuana	24 (26%)	11 (35%)	24 (52%)	59 (35%)	.01
Crack/cocaine	79 (87%)	19 (61%)	9 (20%)	107 (64%)	<.0001
Heroin	22 (24%)	2 (6%)	5 (11%)	29 (17%)	.03
Amphetamines	6 (7%)	1 (3%)	1 (2%)	8 (5%)	.47
Club drugs	4 (4%)	1 (3%)	8 (17%)	13 (8%)	.01
Other drugs	3 (3%)	0 (0%)	2 (4%)	5 (3%)	.53

Table 3.

Multinomial Logistic Regression Predicting Sex-Trading Status Among Women (N= 266).

Variables	Currently trading sex Odds ratio [95% Wald CI]	Formerly traded sex Odds ratio [95% Wald CI]
Age		
18–29	0.25 [0.12, 0.55]	0.28 [0.13, 0.61]
30+	1.0	1.0
Education		
Less than high school diploma	2.67 [1.30, 5.47]	1.56 [0.77, 3.18]
High school diploma+	1.0	1.0
Unstable housing		
Yes	4.03 [1.71, 9.48]	2.61 [1.17, 5.81]
No	1.0	1.0
Child sexual abuse (before age 15)		
Yes	2.14 [1.06, 4.33]	1.66 [0.82, 3.36]
No	1.0	1.0
Injection drug use		
Yes	3.20 [1.21, 8.48]	2.14 [0.78, 5.87]
No	1.0	1.0
Alcohol and cocaine dependence		
Yes	4.21 [1.69, 10.52]	4.66 [1.87, 11.60]
No	1.0	1.0
Risky sex and drug use perceptions		
Agree with 2+ perceptions	3.39 [1.64, 6.99]	1.83 [0.88, 3.79]
Agree with <2 perceptions	1.0	1.0

Note. CI = confidence interval.