



UNIVERSITY OF CALIFORNIA, SAN DIEGO
DIVISION OF GLOBAL PUBLIC HEALTH

Drug Use, Economic Vulnerability, & Experiences of Sexual Violence among Female Sex Workers in Tijuana, Mexico



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Background

- Female sex workers (FSW) are among the groups most affected by HIV in Tijuana, the largest Mexican city bordering the US.
- Among FSW, HIV prevalence is 5-14% (Strathdee et al., 2008; Patterson et al., 2008; Ulibarri et al., 2011).
- High levels of drug use and violence, particularly sexual violence, are primary factors contributing to HIV risk among female sex workers (FSW) in Tijuana.



Background

- Among FSW, drug use has been reported to increase women's experiences of violence.
- Understanding the mechanisms underlying the relation between drug use and violence is important to inform prevention efforts.
- Increasing research suggests that economic vulnerability, often underlying women's involvement in sex work, is associated with both drug use and sexual violence among FSW.
- Drug use may worsen women's economic vulnerability, result in dire economic hardship, unstable housing or living situations, and increased likelihood for women to work on the street or exchange sex for drugs – all factors associated with violence.



Study Objective



This study examines:

- 1) the relation between drug use and women's experiences of sexual violence by perpetrator type
- 2) the extent to which this association may be explained by women's economic vulnerability – including economic hardship, unstable housing, working on the street, and exchanging sex for drugs

Methods

- Data were from the 6 month follow-up survey of the *Mapa de Salud* longitudinal study of FSW (n=529) in Tijuana and Ciudad Juarez, Mexico recruited using venue-based sampling.
- Measures:
 - Sample characteristics: age, marital status, education, children
 - Economic vulnerability: past 6 month economic hardship (i.e. poor/very poor financial situation), unstable housing situation (past 6 months), primarily working on the street (past 30 days), exchanging sex for drugs (past 6 months)
 - sexual victimization (past 6 months) – forced vaginal, oral, or anal sex perpetrated by police, clients
 - Daily drug use (heroin, cocaine, crystal meth, crack)
- Using age-adjusted logistic regression models, we assessed daily drug use in relation to sexual victimization (past 6 months). In subsequent models, we further adjusted for indicators of economic vulnerability to assess for mediation in the relation between drug use and violence.

Results: Sample Characteristics

Drug Use

- 23% reported daily drug use (cocaine, heroin, meth, or crack)

Sexual Violence

- 12% reported past 6 month sexual violence
 - 9% reported police sexual violence
 - 4% reported client sexual violence

Economic Vulnerability

- 30% reported economic hardship (poor or very poor financial situation), past 6 months
- 10% reported unstable housing or living on the street, past 6 months
- 39% reported working on the street, past 30 days
- 15% reported selling sex for drugs, past 6 months

Results: Sample Characteristics

Age	%
18-24	19.9
25-29	15.3
30-34	18.9
35-39	14.4
40 or older	31.6
Marital Status	
Single	48.2
Married	23.8
Divorced, widowed or separated	28.0
Children	
One	14.8
Two	25.1
Three	28.8
Four or more	31.3

City	%
Tijuana	43.7
Ciudad Juarez	56.3
Education	
Less than Primary	23.3
Primary, < secondary	40.5
Secondary, <high school	30.4
High School	3.3
More than High School	2.5
Years Working in Sex Work	
1 or less	10.0
2-5	22.7
6-9	16.3
10-14	15.7
15 or more	35.2

Results: Daily Drug Use & Sexual Violence

- In age-adjusted logistic regression models, FSW who reported daily drug use were
 - **More likely to report sexual victimization by any perpetrator**
OR=3.6; 95%CI:2.1-6.1
 - **More likely to report sexual victimization by police**
OR = 3.7; 95%CI: 2.2-6.5
 - ***Not* more likely to report sexual victimization by clients**
OR = 2.3; 95% CI: 0.9-5.8 (borderline, p=0.07)

Results: Daily Drug Use & Economic Vulnerability

- In age-adjusted logistic regression models, FSW who reported daily drug use were
 - **More likely to report having a poor or very poor financial situation**
OR=2.7; 95%CI:1.2-5.7
 - **More likely to report not having a stable place to live or living on the street**
OR = 9.5; 95%CI: 5.1-17.9
 - **More likely to report working on the street**
OR = 4.5; 95%CI: 2.9-7.0
 - **More likely to report exchanging sex for drugs**
OR = 4.0; 95%CI: 2.4-6.7

Results:

Economic Vulnerability & Police Sexual Violence

- In age-adjusted logistic regression models, FSW who reported sexual violence by police were
 - ***Not* more likely to report having a poor or very poor financial situation**
OR=1.8; 95%CI:1.0-3.5 ****borderline, p=0.06**
 - **More likely to report not having a stable place to live or living on the street**
OR = 4.6; 95%CI: 2.3-9.9
 - **More likely to report working on the street**
OR = 3.0; 95%CI: 1.6-5.7
 - **More likely to report exchanging sex for drugs**
OR = 3.5; 95%CI: 1.7-7.0

Results: Daily Drug Use, Economic Vulnerability, and Sexual Violence

- In age-adjusted logistic regression models, FSW who reported daily drug use were more likely to report sexual victimization by police
Initial multivariate model: OR = 3.7; 95%CI: 2.2-6.5
- Further adjusting for not having a stable place to live
OR = 3.0; 95%CI: 1.5-6.1 **Attenuated effect estimate by 20%**
- Further adjusting for working on the street
OR = 3.2; 95%CI: 1.6-6.3 **Attenuated effect estimate by 14%**
- Further adjusting for exchanging sex for drugs
OR = 2.9; 95%CI: 1.5-5.9 **Attenuated effect estimate by 21%**
- Further adjusted for not having a stable place to live, working on the street, and exchanging sex for drugs
OR = 1.6; 95%CI: 0.7-3.6 **Attenuated effect estimate by 57%, no longer significant**

Limitations

- Cross-sectional analyses does not provide information regarding the temporality of these associations
- Self-reported responses
- Limited statistical power, particularly for client sexual violence that was not as prevalent
- Current study findings are most applicable to populations of FSW working in Tijuana and Ciudad Juarez, Mexico and may not be generalizable to other populations of sex workers from other contexts in Mexico or elsewhere

Conclusions

- Police sexual violence is most common
- Drug use was associated with increased police sexual violence, but not client-perpetrated sexual violence
- The relation between drug use and women's increased experiences of police sexual violence appears to be largely explained by factors related to women's economic vulnerability stemming from drug use
- Strategies to work with police to reduce police violence are needed.
- Efforts to improve women's economic situation – particularly, housing stability may help reduce experiences of police violence, particularly among women who use drugs.

Investigators & Collaborators

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Thank you for your time and interest.

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