Non-Partner Violence Against Women Who Use Drugs in San Francisco

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Abstract

This article examines non-partner violence among women who use methamphetamine (N=322), recruited in an inner-city neighborhood of San Francisco. The combined prevalence of non-partner physical or sexual violence in the past 6 months was 28%, roughly equal to the prevalence of partner violence (26%). In multivariate analysis, factors associated with non-partner violence included frequent subsistence difficulty (adjusted odds ratio [AOR] = 2.43, 95% confidence interval [CI] = [I.3, 4.6]) and sex trade (AOR = 2.27, 95% CI = [I.4, 4.1]). Having a steady male partner was not protective against non-partner violence. Violence perpetrated by non-partners should be considered when assessing social and structural factors that influence women's health.

Keywords

drug use, risk environment, sex trade, subsistence

Introduction

The preponderance of research addressing violence against women in the United States focuses on intimate partner violence, meaning physical or sexual violence perpetrated by male partners (Shannon, Kerr, et al., 2009). However, socially and economically marginalized women are subject to violence not only in intimate relationships but also

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by virtue of living in dangerous communities (Epele, 2002; Magee & Huriaux, 2008; Marshall, Fairbairn, Li, Wood, & Kerr, 2008). In particular, research has shown that women who use illicit drugs are vulnerable to many different types of assailants, including intimate partners, strangers, acquaintances, sex trade clients, police, and drug dealers (El-Bassel, Terlikbaeva, & Pinkham, 2010; Magee & Huriaux, 2008; Wenzel, Hambarsoomian, D'Amico, Ellison, & Tucker, 2006). Some studies suggest that among women who use drugs, partner assault is not the most common form of violence (Marshall et al., 2008).

The distressingly high level of intimate partner violence among women who use drugs is well established (Chermack, Walton, Fuller, & Blow, 2001; El-Bassel, Gilbert, Wu, Go, & Hill, 2005; Kalichman, Williams, Cherry, Belcher, & Nachimson, 1998). Intimate partner violence is 3 times more common among women who use drugs than among other women (El-Bassel et al., 2010) and appears to be particularly common among those women who have partners who also use drugs (Golinelli, Longshore, & Wenzel, 2009). Far less is known about non-partner violence among women who use drugs. Poor women who use illicit drugs often live in harsh social environments and have limited, sometimes perilous, options for generating income, such as sex trade, drug dealing, and panhandling (Magee & Huriaux, 2008; Wenzel, Hambarsoomian, et al., 2006). This makes them vulnerable to physical and sexual violence. A small number of studies have examined non-partner violence among disadvantaged groups of women. A study of injection drug users in Vancouver found that 66% of women reported physical violence at least once during the 5-year study period and that three quarters of attacks were perpetrated by acquaintances or strangers, whereas only 5% were perpetrated by partners (Marshall et al., 2008). The odds of violence were significantly higher among women who reported daily crack use, binge drug use, homelessness, drug dealing, and living in a specific high-risk neighborhood (Downtown Eastside). Data on unwanted sex or sexual violence were not included in this article. In a study of 126 women in substance abuse treatment, 46% reported non-partner violence in the past year (Chermack et al., 2001). Correlates of violence included non-White race, heavy alcohol use, and childhood experiences of violence.

Risk environment theory purports that risk among drug users is shaped by the physical, social, economic, and policy environments where drug use takes place (Rhodes, 2002; Rhodes, Singer, Bourgois, Friedman, & Strathdee, 2005). Rhodes (2009) describes risk environment as "the space—whether social or physical—in which a variety of factors interact to increase the chances of harm occurring" (p. 193). The risk environment concept was first developed in the context of HIV risk (Rhodes, 2002) and more recently extended to the study of violence (Marshall et al., 2008; Shannon et al., 2008). Features of risk environment that have been associated with harm among drug users include single-room occupancy housing (Davidson et al., 2003), inaccessibility of services (Cooper, Bossak, Tempalski, Des Jarlais, & Friedman, 2009; Shannon, Kerr, et al., 2009), unsafe sex trade and drug-dealing venues (Fitzgerald, 2009; Shannon et al., 2008) and residence in high-crime neighborhoods (Marshall et al., 2008). Drawing from this work, we examine whether non-partner violence is associated with factors that reflect participants' risk environment.

This article examines non-partner violence in a sample of women who use methamphetamine, drawn from an urban inner-city communitys in San Francisco (the Tenderloin). It examines the prevalence of physical violence and sexual violence (defined as "unwanted sex") outside of the context of intimate relationships and assesses correlates of these experiences in this population. Effective public health responses to partner and non-partner violence may be substantially different. Understanding the prevalence and correlates of non-partner violence is a first step to developing appropriate intervention strategies.

Method

Data collection was conducted from July 2007 to June 2009 in San Francisco, California. All study procedures were reviewed and approved by the Institutional Review Board at RTI International. A community-based sample was recruited using respondent-driven sampling (RDS; Heckathorn, 1997). RDS is a form of chain-referral sampling that uses statistical adjustment for recruitment patterns (who recruited whom) and network size to produce samples that, theoretically, are generalizable to the target population (Abdul-Quader, Heckathorn, Sabin, & Saidel, 2006). It is often used in studies of "hidden" populations, where stigma or illicit activity precludes the development of a true sampling frame (Malekinejad et al., 2008). A group of initial recruits (or "seeds") were identified by the research team through outreach. Participants were then given up to six coupons to recruit other women who use methamphetamine that they knew. The women recruited by seeds were also given coupons, and so on. Participants received a cash incentive for each eligible person referred by coupon. Eligibility criteria for the study were (a) biological female, (b) age 18 or older, (c) methamphetamine use in past 30 days, (d) one or more male sexual partners in past 6 months, and (e) referred by another participant with RDS recruitment coupon (except seeds). Eligibility was determined through a telephone screening process that masked criteria by including several questions unrelated to eligibility.

Participants engaged in an informed consent process, quantitative interview, and testing for HIV and sexually transmitted infections (STIs) at a centrally located community field site. The quantitative interview was conducted face-to-face, with interviewers posing items verbally and recording responses in a computer-based personal interviewing system (Blaise®, Westat). HIV/STI testing and counseling were provided by trained staff, following San Francisco Department of Public Health guidelines. Women infected with HIV and/or STIs were referred to appropriate medical follow-up services. Study participants received US\$40 for the initial interview and testing session and US\$30 for HIV and STI counseling sessions. They also received a US\$10 to US\$20 incentive for each eligible participant they referred to the study (this incentive was increased midway through the study to improve recruitment).

Measures

Dependent variables in bivariate and multivariate analyses. The dependent variable in bivariate and multivariate analyses was "non-partner violence." This variable combined two

items, one regarding physical violence and one regarding unwanted sex. To determine physical violence, participants were asked, "In the past 6 months, have you been hit, slapped, kicked, or physically hurt by an adult?" To determine sexual violence, participants were asked, "In the past 6 months, have you had any unwanted sexual experiences?" These items were drawn from the Behavioral Risk Factor Surveillance System survey, developed by the Centers for Disease Control and Prevention (2006). Affirmative responses to either of these questions were followed with a query regarding the participant's relationship to the assailant(s). Responses were coded as follows: (a) current boyfriend or husband, (b) former boyfriend or husband, (c) male you were dating, (d) male friend, (e) female friend, (f) family member, (g) acquaintance, (h) paying sex partner, (i) stranger, or (j) other. Assaults made by current or former boyfriends or husbands, or a man whom the woman was dating, were defined as "partner violence." Assaults by male or female friends, acquaintances, paying sex partners, and strangers were defined as "non-partner violence." There was one report of violence by a family member, which we removed from analysis because family violence is a separate line of inquiry, and the frequency was too low to conduct analyses. There were two cases of women reporting assault by female intimate partners, which we included in the "partner violence" category.

Independent variables in bivariate and multivariate analyses. As the literature on non-partner violence is limited, many candidate independent variables were drawn from the literature regarding intimate partner violence among women who use drugs. These include heavy alcohol use, use of cocaine and other drugs, unprotected sex, and STI infection. Daily alcohol use was defined as a response of "30" to the question, "How many days in the past 30 did you drink alcohol?" Drug use past 30 days was measured by the item, "In the past 30 days have you used [drug]?" Affirmative responses were followed by the question, "How many days in the past 30 have you used [drug]?" Participants were asked separately about injection and non-injection drug use. "Unprotected vaginal sex" was defined as less than 100% condom use during vaginal sex with one or more partners. The variable "sexually transmitted infection" includes women who tested positive for the non-viral infections of Chlamydia, gonorrhea, or vaginal trichomonas. The variable "HIV-positive" includes women who tested positive for antibodies to HIV infection.

Additional independent variables were chosen based on risk environment theory. Homelessness was defined as an affirmative response to the question, "Do you consider yourself homeless?" Panhandling was based on the item, "In the past 6 months, did you earn income from panhandling?" "Traded sex for money or drugs" was defined as a positive response to either or both of the items, "In the past 6 months, have you traded sex for money?" and "In the past 6 months, have you traded sex for drugs?" We included "steady male partner" as an independent variable based on ethnographic literature suggesting that sometimes women partner with men for protection from street violence (Bourgois, Prince, & Moss, 2004; Epele, 2002). Steady male partner was defined as a response of 1 or more to the question, "Of the male sexual partners you've had in the past 6 months, how many were steady sex partners?"

"Frequent subsistence difficulty" was based on the Competing Priorities Scale by Gelberg, Gallagher, Andersen, and Koegel (1997), which consists of five items: "In the past 6 months, how often had you had trouble (a) finding a place to sleep, (b) getting enough to eat, (c) having enough clothing, (d) finding a place to wash, (e) finding a place to use the bathroom." There are four response categories, which range from never (scored as 1) to usually (scored as 4), which are summed for a range of 5 to 20 points. A score >15 on the 20-point scale was defined as frequent subsistence difficulty (Lorvick et al., 2010).

Lifetime and recent experiences of violence. To provide context for findings, this article provides an overview of the prevalence of lifetime and recent experiences of threats, physical violence, and unwanted sex among women in the sample. Lifetime adult violence was assessed by a series of items that asked "Since the age of 18, has anyone ever threatened to physically hurt you?" "... has anyone threatened you with a knife, gun or other weapon?" "... have you ever been hit, slapped, kicked, or physically hurt by an adult?" "... have you ever had any unwanted sexual experiences?" Affirmative responses were followed by a question pertaining to the past 6 months and the items regarding the participants' relationship to the assailant(s), as described above. Childhood violence was assessed in two separate items, "Before the age of 18, were you ever hit, slapped, kicked, or physically hurt by an adult?" and "Before the age of 18, were you personally ever touched in a sexual way by an adult or older child when you did not want to be touched that way, or were you ever forced to touch an adult or older child in a sexual way that you did not want to do?"

Data Analysis

All statistical analyses were conducted using SAS Version 9.2. Comparisons of the prevalence of partner and non-partner violence were conducted using the McNemar test. Comparisons of dichotomous variables between individuals who reported and did not report non-partner violence were conducted using a Pearson's chi-square test. Standard multivariate regression analysis was used to identify whether non-partner violence was independently associated with selected outcomes described above. Only those outcomes that were statistically significant at the .10 level or lower in bivariate analysis were included in the multivariate model. Pearson correlation coefficients were examined for all the independent variables in the model. The model was assessed for goodness of fit using the Hosmer–Lemeshow test (Hosmer & Lemeshow, 2000).

Results

The sample was racially diverse, and most participants were 40 years or older (Table 1). The mean number of days of methamphetamine use in the past month was 17. Nearly all women (91%) reported using illicit drugs in addition to methamphetamine in the past 30 days (data not shown).

Table 1. Selected Characteristics of Study Participants (N = 322).

	%
Demographic characteristics	
Race/ethnicity	
African American	46
White	33
Native American	5
Latina	4
Asian or Pacific Islander	2
Mixed race	9
Other/refused	1
Age	
18-29	21
30-39	23
40-49	33
50 or older	24
High school diploma or GED	72
Homeless	57
Drug use past 30 days	
Modes of methamphetamine use	
Injected	47
Non-injected	85
Other drug use	
Injected heroin	28
Smoked crack cocaine	62
Smoked marijuana	58
Polydrug use (>1 illicit drug)	91
Sex trade past 6 months	
Traded sex for drugs	45
Traded sex for money	56

Prevalence of Violence

The lifetime prevalence of violence was very high, both in childhood and adulthood (Table 2). Notably, more than 70% of women reported a history of childhood physical and/or sexual abuse. The mean and median age that childhood physical abuse commenced was 7 years; the mean and median age that sexual abuse commenced was 8 years.

Experiences of partner and non-partner violence in the past 6 months were also very prevalent (Table 3). Physical assault was significantly more prevalent at the hands of partners than non-partners; by contrast, unwanted sex occurred significantly more with non-partners than partners. Inclusive of either physical or sexual violence, 26% of women experienced partner assault and 28% reported non-partner assault in the past 6 months. Partner violence and non-partner violence were not correlated.

Table 2. Lifetime Prevalence of Violence (N = 322).

	%
Before age 18	
Physical abuse	74
Sexual abuse	71
Since age 18	
Physically threatened	86
Threatened with weapon	66
Physically assaulted	86
Unwanted sexual experiences	75

Table 3. Violence Experienced Past 6 Months (N = 322).

	%	₽ª
Physically threatened		
Non-partner	29	ns
Partner	22	
Either	46	
Threatened with weapon		
Non-partner	10	ns
Partner	6	
Either	16	
Physically assaulted		
Non-partner	15	.05
Partner	22	
Either	34	
Unwanted sex		
Non-partner	21	<.001
Partner Partner	11	
Either	30	

^aComparison of partner and non-partner.

Among women reporting non-partner physical assault in the past 6 months (n = 48), the most common perpetrators were acquaintances (35%), strangers (27%), and male friends (21%). Among women reporting unwanted sex from non-partners in the past 6 months (n = 68), the most common perpetrators were male friends (33%), sex trade clients (32%), and acquaintances (22%). Physical violence and unwanted sex by non-partners were highly correlated (p < .0001).

Correlates of Non-Partner Violence

A total of 90 women (28% of the sample) had experienced non-partner violence (physical violence or unwanted sex) in the 6 months prior to interview (Table 4). In

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	Physical assault			Unwanted sex			
	No (n = 274)	Yes (n = 48)		No (n = 256)	Yes (n = 66)		
Independent variables	%	%	Þ	%	%	Þ	
Past 30 days				-			
Injected methamphetamine	46	52	ns	48	43	ns	
Injected heroin	23	29	ns	24	24	ns	
Smoked crack	61	63	ns	59	71	.09	
Drank alcohol daily	18	23	ns	18	21	ns	
Currently homeless	56	65	ns	54	70	.02	
Past 6 months							
Panhandled	27	40	ns	25	45	<.01	
Frequent subsistence difficulty	16	33	<.01	62	38	<.01	
Traded sex for money or drugs	58	77	.01	55	82	<.01	
Steady male sex partner	71	56	.05	71	59	.06	
Unprotected vaginal sex	77	77	ns	77	79	ns	
Positive for STI ^a	24	29	ns	24	29	ns	
HIV-positive	7	8	ns	9	5	ns	

Table 4. Bivariate Correlates of Non-Partner Physical Assault and Unwanted Sex (N = 322).

Note. STI = sexually transmitted infections.

bivariate analysis, neither race nor age was correlated with non-partner violence (data not shown). Similarly, drug use items were not associated with non-partner violence. The mean number of days of methamphetamine use in the past month was similar for those experiencing and not experiencing non-partner violence (18.5 days vs. 17.6 days; p > .05).

Bivariate associations were found between non-partner violence and factors bearing upon the risk environment of participants. These included homelessness, sex trade, panhandling, and frequent subsistence difficulty. Having a steady male partner was associated with a lower prevalence of non-partner violence in bivariate analysis. Women involved in sex trade had a substantially higher prevalence of non-partner violence in the past 6 months. Although these women (n = 70) were often assaulted by paying partners (36%), they also reported assaults by acquaintances (33%), male friends (26%), and strangers (23%).

The independent effect of factors associated with non-partner violence was examined in multivariate regression (Table 5). Women who traded sex for money or drugs had more than twice the odds of experiencing non-partner violence, as did women who had the greatest difficulty meeting subsistence needs. Having a steady male partner was not independently protective against non-partner violence. The model adequately fit the data (Hosmer–Lemeshow $\chi^2 = 4.3$, df = 7, p = .74).

^aGonorrhea, trichomonas, or Chlamydia.

	Model 1: Physical assault		Model 2: Unwanted sex	
	AOR	95% CI	AOR	95% CI
Smoked crack	_	_	1.18	[0.62, 2.2]
Currently homeless	_	_	1.22	[0.65, 2.3]
Panhandled	1.35	[0.69, 2.6]	1.82*	[1.0, 3.3]
Frequent subsistence difficulty	2.16*	[1.1, 4.4]	2.24*	[1.1, 4.4]
Traded sex for money or drugs	1.92	[0.91, 4.0]	2.73*	[1.3, 5.6]
Steady male partner	0.61	[0.32, 1.2]	0.75	[0.4], 1.26]

Table 5. Factors Associated With Non-Partner Physical Violence and Unwanted Sex in Multivariate Analysis.

Note. AOR = adjusted odds ratio; CI = confidence interval. *p < .05.

Discussion

This exploration of non-partner violence among women who use methamphetamine offers several compelling findings. A fundamental observation is that the prevalence of non-partner violence was high and on a par with intimate partner violence. This suggests that non-partner violence should receive more attention as a social/structural factor that influences health behavior among marginalized women.

Our findings suggest that subsistence difficulty, including the need to sell sex for survival, increases the vulnerability of women as targets of physical violence and unwanted sex. This is consistent with other research on risk environment (Shannon et al., 2011; Shannon, Strathdee, et al., 2009). Frequent subsistence difficulty suggests a level of deprivation that may expose women to particularly dangerous situations, either because their needs are severe or because their ability to meet their needs is insufficient, or both. The connection between street-level sex trade and assaults on women who use drugs is well established (Cohan et al., 2006; Dalla, Xia, & Kennedy, 2003; Pyett & Warr, 1997). Our findings suggest that sex trade increases vulnerability to violence beyond the purview of sexual transactions. Although violence from clients was common, women engaged in sex trade also experienced extraordinary levels of violence from a variety of other perpetrators. This fits into a larger picture of vulnerability associated with the dangers of extreme need and limited options.

Several limitations of this study should be noted. The variable measuring sexual violence is vague ("unwanted sexual experiences"), and varying interpretations of this item by participants may have resulted in over- or underreporting. Even when clearly defined, perceptions of physical and sexual violence can differ among women depending on their circumstances (Wenzel, Tucker, Hambarsoomian, & Elliott, 2006). Furthermore, although we interpret "unwanted sex" as a form of violence, this interpretation may not reflect women's individual experiences (Peterson & Muehlenhard, 2007). Another limitation is that we lacked data regarding the frequency and severity of violence, which in some studies has affected outcomes (Chermack & Blow, 2002).

Data were self-reported and may be subject to response bias. A review of research regarding the validity and reliability of self-report data from illicit drug users suggests that such data are sound (Darke, 1998). The study used RDS with the goal of recruiting a representative sample of women who use methamphetamine in San Francisco. However, a growing body of research presents evidence questioning the representativeness of RDS samples (Burt, Hagan, Sabin, & Thiede, 2010; Kral et al., 2010; Ruan et al., 2009). Other research points to the lack of peer-reviewed standards regarding the use of RDS-weighted estimates in multivariate analysis (Burt, Thiede, & Hagan, 2009; Ober, Shoptaw, Wang, Gorbach, & Weiss, 2009). Due to the lack of clarity regarding fundamental assumptions and methods of applied analysis, RDS weights were not used in this article. Thus, as with other non-probability samples, it is not known whether findings apply generally to women who use methamphetamine. Finally, this is an exploratory, cross-sectional study that does not establish causality. As with many other complicated social phenomena, the relationships being explored may be bidirectional and complex in terms of causation (Wenzel, Tucker, et al., 2006). Future studies using longitudinal designs could help clarify the nature of the relationship between unmet subsistence needs and non-partner violence.

Future research in the area of non-partner violence against women should seek stronger measures of risk environment. At the community level, measures such as "neighborhood disadvantage," typically based on census block groups, tend not to be useful because there is little variability within neighborhoods where impoverished substance users live. We relied on individual-level variables, such as homelessness, which were suggestive of risk environment, but do not measure it directly. A more ecological approach to characterizing risk environment is needed, perhaps through ethnographic work that describes physical and social environments block-by-block (Lopez, 2012). In a mixed methods approach, ethnographic data could be cross-referenced with epidemiological data to assess the components of risk environment with greatest impact. In addition, more research regarding how the individual and the environment interact to create or reduce risk could be illuminating (Jones, 2006). For example, although more than half the women in this study were homeless, only about 20% reported frequent subsistence difficulty. Examining how some women more successfully manage their environments, despite homelessness and other forms of adversity, would be fruitful in identifying strategies and characteristics that promote resilience.

Non-partner violence needs to be addressed with structural interventions to increase physical safety and increase licit economic opportunities among women who use drugs. Violence that occurs at the community level may be particularly amenable to structural solutions. Safe spaces for women to congregate, address their basic needs for food and hygiene, and connect with each other are an example of a simple strategy that can offer respite from violence (Magee & Huriaux, 2008). In the area of domestic violence, policing practices have changed markedly in recent decades, leading to a new recognition of the seriousness of this type of violence against women. With time and concerted action, perhaps similar progress could be made in the attitudes and practices of police toward marginalized groups of women who are victimized by

non-partners. Although more research is needed to understand the contexts and the impact of non-partner violence, there are structural measures that can improve the safety of disadvantaged women now.

Declaration of Conflicting Interests

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Lynn D. Wenger, MSW, MPH, is a research epidemiologist with more than 20 years of experience conducting community-based studies with marginalized populations in San Francisco. She has extensive experience conducting qualitative, quantitative, and mixed methods research.

Philippe Bourgois, PhD, is a professor of anthropology and family and community medicine at the University of Pennsylvania. His research in the United States confronts inner-city social suffering and critiques the political economy and cultural contours of U.S. apartheid. He also addresses gender power relations and the intersections between structural and intimate violence. His most recent work focuses on substance abuse, violence, homelessness, and HIV prevention.

Helen Cheng, MS, is a research statistician who has contributed her skills to many studies regarding women's health, in both domestic and international settings.

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