

# Prevalence and Correlates of Intimate Partner Violence Victimization Among Men and Women Entering Substance Use Disorder Treatment

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Intimate partner violence victimization was examined in men ( $N = 4,459$ ) and women ( $N = 1,774$ ) entering substance use disorder treatment. Nearly 1 in 2 women and 1 in 10 men reported lifetime victimization by an intimate partner. Entering treatment for alcohol, as compared to drug abuse and history of childhood abuse, were each associated with intimate partner violence victimization. Victimization by an intimate partner was also associated with mental health problems, including depression, anxiety, and attempted suicide. Although victimization was linked to physical health problems, the nature of these problems varied by gender. Women and men with a history of intimate partner victimization present to substance use disorder treatment with a complex array of mental and physical health problems.

**Keywords:** intimate partner violence; alcohol abuse; drug abuse; mental health; physical health; child abuse

Physical assault by an intimate partner is a major public health concern (Coker et al., 2002). A recent study of women and men in 16 states and 2 U.S. territories found that approximately 26% of women and 16% of men had been physically or sexually victimized by an intimate partner (Breiding, Black, & Ryan, 2008). In previous population-based research, nearly 23% of women and 8% of men reported lifetime physical intimate partner violence (IPV) victimization (Desai, Arias, Thompson, & Basile, 2002).

Rates of IPV victimization are even higher among women and men with a substance use disorder (SUD). Substance use has been associated with an increased risk of IPV victimization for women in the community (El-Bassel et al., 2003; Testa, Livingston, & Leonard, 2003). Women in treatment for cocaine dependence (Dansky, Byrne, & Brady, 1999) or in methadone maintenance treatment (El-Bassel et al., 2004) report elevated rates of IPV victimization relative to women in the general population. In men, problem drinking has been linked to an increased risk for victimization by an intimate partner (White & Chen, 2002), and among men in SUD treatment, alcohol use has been associated with severe IPV victimization (Chermack, Walton, Fuller, & Blow, 2001). In addition, men seeking treatment for cocaine dependence have a rate of IPV victimization that is four times the rate observed in the general population (Dansky et al., 1999). Despite the link between substance abuse and IPV victimization, little research has addressed IPV victimization in SUD patients. The present study examines rates of physical IPV victimization, as well as the correlates of physical IPV victimization, in a large, national sample of women and men entering SUD treatment in the United States.

Efforts to isolate predictors of IPV victimization in nonclinical populations suggest that childhood abuse predisposes women to experience later victimization by an intimate partner (Seedat, Stein, & Forde, 2005). Child physical abuse has consistently been linked to increased risk of IPV victimization among women, and some evidence suggests that child sexual abuse may also predict subsequent IPV victimization (Coid et al., 2001; Desai et al., 2002; Whitfield, Anda, Dube, & Felitti, 2003). Few analogous studies of men exist, but preliminary findings suggest that men with a history of child physical or sexual abuse are more likely to be victimized by an intimate partner in adulthood (Desai et al., 2002; Schafer, Caetano, & Cunradi, 2004).

Research with nonclinical populations provides support for relations between child abuse and IPV victimization, particularly for women, but findings are equivocal regarding the link between child abuse and IPV victimization in SUD patients. Among women in treatment for an alcohol use disorder, child physical abuse failed to predict past-year IPV victimization (Chase, O'Farrell, Murphy, Fals-Stewart, & Murphy, 2003). Similarly, child physical abuse was not associated with past-year IPV victimization among women and men in SUD treatment (Chermack et al., 2001). However, significant relations have emerged between child physical or sexual abuse and IPV victimization among women in methadone maintenance treatment (El-Bassel, Gilbert, Schilling, & Wada, 2000). Possibly, child abuse is less important than other patient characteristics (e.g., demographics, types of substances used) in predicting IPV victimization in SUD populations. Given contradictory findings regarding a relationship between child abuse and IPV victimization in SUD patients, additional research is needed to determine whether child abuse is associated with increased risk for IPV victimization among women and men with an SUD.

In epidemiological research with community samples, IPV victimization has been linked to a number of adverse mental and physical health outcomes. Both women and men with a history of IPV victimization report higher rates of depression and psychiatric distress, poor physical health, and injury (Breiding et al., 2008; Carbone-Lopez, Kruttschnitt, & Macmillan, 2006; Coker et al., 2002). However, other evidence suggests that the impact of IPV victimization is moderated by gender, with women, relative to men, reporting poorer mental health following IPV victimization. Among college students, women, but not men, with a history of IPV victimization were more likely to endorse symptoms of depression and anxiety, as well as suicidal ideation, relative to their peers (Romito & Grassi, 2007). Although they did not report more mental health symptoms, male college students who

had been victimized by an intimate partner were more likely than those without IPV victimization to report poor general health. Involvement in a violent relationship has also been shown to predict psychiatric problems in women, but not men, in prospective research (Ehrensaft, Moffitt, & Caspi, 2006). However, this study had small sample sizes (38 women and 37 men reported involvement in a violent relationship).

Despite evidence that IPV victimization and substance abuse commonly co-occur, few studies have examined rates of IPV victimization or the correlates of IPV victimization among patients in SUD treatment. Much of the research on IPV has focused exclusively on the victimization of women, leaving many unanswered questions about the correlates of IPV victimization for men. The present study examined IPV victimization, defined as physical assault by a current or former intimate partner, in a national sample of men and women entering SUD treatment with three aims: (1) report the prevalence of lifetime IPV victimization in women and men entering SUD treatment; (2) test relations between child abuse and IPV victimization in female and male SUD patients; and (3) assess relations between IPV victimization and mental and physical health problems in female and male SUD patients, after adjusting for demographic, substance use, and child physical and sexual abuse variables. Findings have direct relevance to the development of targeted prevention programs because SUD treatment provides a unique opportunity to educate patients about healthy intimate relationships and the role of substance abuse in the pathogenesis of IPV victimization.

## METHODS

### Sample and Procedures

Data from the National Treatment Improvement Evaluation Study (NTIES) were used in this study. NTIES recruited men and women entering SUD treatment at 71 sites across the United States between July 1993 and November 1994. Of those eligible to participate, 85% completed an hour-long semistructured study interview (Gerstein et al., 1997). Present analyses were limited to the 1,774 (96%) women and 4,459 (94%) men age 18 or older. NTIES participants are representative of other large studies of patients in SUD treatment on socio-demographic and substance use variables (Gerstein et al., 1997). Additional information on NTIES procedures is available elsewhere (Gerstein et al., 1997). The current study was approved by the Institutional Review Board at Stanford University School of Medicine.

### Interview Questions

**Lifetime IPV Victimization.** IPV victimization was defined as physical assault by an intimate partner. Patients were asked whether they had ever been “attacked or seriously beaten” by a husband, wife, or partner. Answers were coded dichotomously (0 = no IPV; 1 = IPV).

**Sociodemographics.** Age was dichotomized at the median (0 = less than 32 years; 1 = 32 years or older). In NTIES, race/ethnicity was categorized as Black, Hispanic, or non-Black, non-Hispanic (i.e., White/other). Participants were asked whether they had a high school diploma or GED (0 = yes; 1 = no) and had ever been married (0 = no; 1 = yes).

**Substance Abuse.** Participants indicated whether they were seeking treatment for use of alcohol, cocaine, crack, heroin, or marijuana (for each of the 5 items: 0 = no; 1 = yes). Items were not mutually exclusive. That is, participants could indicate that they were seeking treatment for more than one substance. For example, participants who endorsed seeking treatment for alcohol abuse included both participants who were

seeking treatment exclusively for alcohol abuse and participants who were seeking treatment for alcohol and drug abuse. Participants were also asked to indicate whether they had ever injected drugs (0 = no; 1 = yes).

**Child Abuse.** Participants were asked whether they had: (1) been attacked or seriously beaten by a parent or caregiver (child physical abuse: 0 = no; 1 = yes); or (2) forced to have sex prior to age 18 (child sexual abuse: 0 = no; 1 = yes).

**Mental Health.** Five items assessed lifetime mental health problems. Anxiety was defined as having “ever felt very frightened or nervous when you were not the center of attention or in any danger.” Patients were asked whether they had ever experienced a period of 2 weeks or longer when they: (1) felt very sad or depressed; or (2) had lost interest or pleasure in things. Depression was defined as endorsement of either item. Psychosis was defined as having seen or heard things that no one else could see or hear. Suicidality was assessed with three items inquiring as to whether patients had: (1) ever thought seriously about committing suicide; (2) ever attempted suicide; and (3) attempted suicide in the past 12 months. Each mental health item was coded dichotomously (0 = no; 1 = yes).

**Physical Health.** Seven physical health problems in the past month were assessed, including: (1) respiratory (bronchitis, asthma, or another serious breathing problem); (2) circulatory (a serious heart or blood problem, such as high blood pressure or anemia); (3) neurological (a serious nerve condition, such as convulsions, epilepsy, or migraine headaches, excluding mental health problems); (4) internal organ (a serious internal condition, such as stomach ulcers, sugar diabetes, or kidney or liver problems); (5) bone or muscle (a serious bone or muscle condition, such as being paralyzed, bad arthritis, limping, or bursitis); (6) hepatitis; and (7) a sexually transmitted disease (STD) other than HIV/AIDS. Patients were also asked whether they had ever been diagnosed with HIV/AIDS. Each physical health item was coded dichotomously (0 = no; 1 = yes).

## Data Analysis

Logistic regression analyses were conducted using SPSS, version 15.0. Bivariate relations between demographic, substance use, and child abuse variables and lifetime IPV victimization were tested separately by gender. Bivariate relations between IPV victimization and each of the mental and physical health variables were also examined separately by gender. Next, relations between lifetime IPV victimization and each of the mental and physical health variables were tested, after adjusting for significant demographic, substance use, and child abuse variables. Separate multivariate models were constructed for women and men. Demographic, substance use, and child abuse variables that were significant in bivariate tests at the  $p \leq .05$  level were included as covariates in multivariate models to examine relations between IPV victimization and health.

## RESULTS

Lifetime IPV victimization was reported by 46.7% of women ( $n = 828$ ) and 9.5% of men ( $n = 422$ ). Results of logistic regression analyses examining bivariate relations between demographic, substance use, and child abuse variables and lifetime IPV victimization are presented in Table 1. Women at or above the median age of 32, women without a high school diploma or GED, and women who had been married were more likely to report lifetime IPV victimization; Black women were less likely to report IPV victimization relative

to non-Black, non-Hispanic women. Relative to women entering treatment for drug abuse only, women entering treatment for alcohol abuse (or alcohol and drug abuse) were more likely to report IPV victimization. Injection drug use was also associated with IPV victimization in bivariate analyses. In addition, women with a history of child physical or sexual abuse had greater odds of experiencing victimization by an intimate partner.

Among men, significant bivariate relations emerged between age, race/ethnicity, and marital status and lifetime IPV victimization. Older men and men who had ever been married were more likely to report lifetime IPV victimization; Hispanic men were less likely to report IPV victimization relative to non-Black, non-Hispanic men. Men entering treatment for alcohol abuse (or alcohol and drug abuse) were more likely to have experienced IPV victimization than men entering treatment for drug abuse. Injection drug use was also associated with IPV victimization. As with women, men who reported child physical or sexual abuse were more likely to have been victimized by an intimate partner.

Results of logistic regressions examining bivariate and multivariate relations between IPV victimization and each of the mental and physical health problems are reported in Table 2. For women, in bivariate tests, IPV victimization was associated with all of the mental and physical health problems assessed, with the exception of hepatitis and HIV/AIDS. In multivariate analyses with women, after adjusting for age, race/ethnicity, education, marital status, entering treatment for alcohol abuse, having injected drugs, and child physical and sexual abuse, IPV victimization was associated with greater odds of reporting symptoms of anxiety, depression, and psychosis, as well as suicidal ideation and lifetime suicide attempt. After adjusting for covariates, IPV victimization was also associated with greater odds of reporting recent circulatory, neurological, and bone or muscle problems and an STD among women.

As reported in Table 2, for men, IPV victimization was associated with all of the mental health variables and respiratory, circulatory, and bone or muscle problems in bivariate analyses. In multivariate analyses with men, after adjusting for age, race/ethnicity, marital status, entering treatment for alcohol abuse, having ever injected drugs, and child physical and sexual abuse, IPV victimization was associated with greater odds of reporting each of the mental health problems assessed (i.e., anxiety, depression, psychosis, suicidal ideation, and lifetime and recent suicide attempt). With regard to physical health problems, in multivariate analyses with men, IPV victimization was associated with respiratory, circulatory, and bone or muscle problems.

## DISCUSSION

IPV is a significant public health concern for SUD patients of both genders, with as many as 1 in 2 women and 1 in 10 men entering SUD treatment with a history of physical IPV victimization. The rate of lifetime IPV victimization for women entering SUD treatment was twice that reported in previous population-based research (i.e., approximately 47% vs. 23%), whereas the rate of IPV victimization for men entering SUD treatment was only slightly higher than that reported in the general population (i.e., 9.5% vs. 8%; Desai et al., 2002). As in other clinical populations (O'Leary, 2000), gender differences in the prevalence of IPV may be even more pronounced among SUD patients than in the general population. Alternatively, gender differences in rates of physical IPV victimization could reflect differences in the way women and men responded to the item used to measure IPV victimization and their willingness to disclose past victimization.

**TABLE 1. Associations Between Lifetime IPV Victimization and Demographics, Substance Use, and Child Abuse for Women and Men**

Demographics, Substance Use, & Child Abuse	Women (N = 1,774)			Men (N = 4,459)		
	IPV n (%)	No IPV n (%)	OR (95% CI)	IPV n (%)	No IPV n (%)	OR (95% CI)
Age (≥ 32)	441 (53.3)	432 (45.7)	1.37 (1.12–1.64)**	243 (57.6)	2108 (52.2)	1.24 (1.01–1.52)*
Race/ethnicity						
Black	475 (57.4)	624 (66.0)	.67 (.54–.83)***	221 (52.4)	2,127 (52.7)	.88 (.71–1.09)
Hispanic	107 (12.9)	107 (11.3)	.87 (.63–1.21)	45 (10.7)	589 (14.6)	.65 (.46–.91)*
Non-Black, Non-Hispanic	246 (29.7)	215 (22.7)	referent	156 (37.0)	1,321 (32.7)	referent
No HS diploma/GED	423 (51.1)	430 (45.5)	1.25 (1.04–1.51)*	160 (37.9)	1,679 (41.6)	.86 (.70–1.05)
Ever married	399 (48.2)	310 (32.8)	1.91 (1.57–2.31)***	199 (47.2)	1,586 (39.3)	1.38 (1.13–1.69)**
Entering treatment for						
Alcohol	370 (44.7)	324 (34.2)	1.55 (1.28–1.88)***	225 (53.3)	1,937 (48.0)	1.24 (1.01–1.51)*
Cocaine	260 (31.4)	299 (31.6)	.99 (.81–1.21)	153 (36.3)	1,360 (33.7)	1.12 (.91–1.38)
Crack	366 (44.2)	399 (42.2)	1.09 (.90–1.31)	109 (25.8)	961 (23.8)	1.12 (.89–1.40)
Heroin	164 (19.8)	217 (22.9)	.83 (.66–1.04)	73 (17.3)	817 (20.2)	.82 (.63–1.07)
Marijuana	75 (9.1)	103 (10.9)	.82 (.60–1.12)	85 (20.1)	764 (18.9)	1.08 (.84–1.34)
Ever injected drugs	320 (38.6)	284 (30.0)	1.47 (1.21–1.79)***	184 (43.6)	1,415 (35.1)	1.43 (1.17–1.76)**
Child physical abuse	218 (26.3)	68 (7.2)	4.61 (3.45–6.17)***	109 (25.8)	476 (11.8)	2.61 (2.05–3.31)***
Child sexual abuse	301 (36.4)	177 (18.7)	2.48 (2.00–3.08)***	45 (10.7)	164 (4.1)	2.82 (1.99–3.99)***

\**p* < .05. \*\**p* < .01. \*\*\**p* < .001.

**TABLE 2. Bivariate and Multivariate Relations Between Lifetime IPV Victimization and Self-Reported Mental Health and Physical Health Problems for Women and Men**

Health Problems	Women (N = 1,774)				Men (N = 4,459)			
	IPV n (%)	No IPV n (%)	OR (95% CI)	aOR <sup>a</sup> (95% CI)	IPV n (%)	No IPV n (%)	OR (95% CI)	aOR <sup>b</sup> (95% CI)
Anxiety	341 (41.3)	245 (26.0)	2.01 (1.64–2.45)***	1.58 (1.27–1.96)***	179 (42.5)	1,078 (26.7)	2.03 (1.65–2.49)***	1.78 (1.44–2.20)***
Depression	678 (81.9)	652 (69.0)	2.03 (1.62–2.54)***	1.54 (1.21–1.96)***	336 (79.6)	2,652 (65.7)	2.04 (1.60–2.61)***	1.74 (1.35–2.23)***
Psychosis	343 (41.4)	274 (29.0)	1.73 (1.42–2.11)***	1.51 (1.22–1.87)***	201 (47.9)	1,335 (33.1)	1.86 (1.52–2.27)***	1.59 (1.29–1.97)***
Suicidal ideation	568 (68.6)	460 (48.7)	2.30 (1.90–2.80)***	1.69 (1.37–2.09)***	219 (51.9)	1,453 (36.0)	1.92 (1.57–2.34)***	1.57 (1.27–1.93)***
Lifetime suicide attempt	383 (46.3)	243 (25.7)	2.49 (2.04–3.04)***	1.73 (1.39–2.16)***	112 (26.5)	692 (17.1)	1.75 (1.39–2.20)***	1.42 (1.11–1.81)**
Past year suicide attempt	115 (13.9)	87 (9.2)	1.59 (1.18–2.14)**	1.21 (.88–1.67)	42 (10.0)	199 (4.9)	2.13 (1.50–3.02)***	1.82 (1.27–2.62)**
Respiratory	206 (24.9)	180 (19.0)	1.41 (1.13–1.77)**	1.15 (.90–1.47)	62 (14.7)	387 (9.6)	1.62 (1.22–2.17)**	1.50 (1.12–2.01)**
Circulatory	210 (25.4)	174 (18.4)	1.51 (1.20–1.90)***	1.32 (1.03–1.69)*	63 (14.9)	421 (10.4)	1.51 (1.13–2.01)**	1.37 (1.02–1.84)*

Neurological	203 (24.5)	160 (16.9)	1.60 (1.27–2.02)***	1.30 (1.01–1.68)*	65 (15.4)	503 (12.5)	1.23 (.97–1.69)	1.10 (.83–1.48)
Internal organ	173 (20.9)	138 (14.6)	1.55 (1.21–1.98)**	1.27 (.98–1.66)	51 (12.1)	380 (9.4)	1.32 (.97–1.80)	1.12 (.81–1.55)
Bone or muscle	127 (15.4)	114 (12.1)	1.32 (1.01–1.74)*	1.41 (1.08–1.85)*	79 (18.7)	505 (12.5)	1.61 (1.24–2.09)***	1.41 (1.08–1.85)*
Hepatitis	21 (2.5)	16 (1.7)	1.51 (.79–2.92)	1.03 (.49–2.13)	6 (1.4)	69 (1.7)	.83 (.36–1.92)	.62 (.25–1.45)
HIV/AIDS	40 (4.8)	42 (4.4)	1.09 (.70–1.70)	.87 (.53–1.43)	17 (4.0)	101 (2.5)	1.64 (.97–2.76)	1.50 (.87–2.59)
Other STD	78 (9.4)	46 (4.9)	2.03 (1.39–2.96)***	2.09 (1.39–3.12)***	13 (3.1)	97 (2.4)	1.29 (.72–2.32)	1.14 (.62–2.07)

\* $p < .05$ . \*\* $p < .01$ . \*\*\* $p < .001$ .

<sup>a</sup>Adjusted for age, race/ethnicity, education, marital status, entering treatment for alcohol use, injected drugs, and child physical and sexual abuse. <sup>b</sup>Adjusted for age, race/ethnicity, marital status, entering treatment for alcohol use, injected drugs, and child physical and sexual abuse.



Results support prior research on the relationship between alcohol abuse and IPV victimization (Lipsky, Caetano, Field, & Larkin, 2005; White & Chen, 2002) and suggest that IPV victimization is more common among SUD patients who have injected drugs. Consistent with population-based research (Desai et al., 2002) and some research with SUD patients (El-Bassel et al., 2000), child physical and sexual abuse were associated with lifetime IPV victimization for women and men. In addition, relative to other SUD patients, those with a history of IPV victimization reported more mental and physical health problems. Findings suggest that patients entering SUD treatment should be screened for IPV victimization. Additional psychosocial services in the context of standard SUD treatment may be warranted for patients with a history of IPV victimization.

Possibly, women with access to fewer economic resources are at greater risk for victimization (Bohn, Tebben, & Campbell, 2004). Despite similarities in the demographic and substance use correlates of IPV victimization for women and men, lack of a high school diploma or GED was associated with IPV victimization among women, but not men. Black women were less likely to have been victimized relative to non-Black, non-Hispanic women, and Hispanic men were less likely to have been victimized than non-Black, non-Hispanic men. However, the limited number of racial/ethnic categories used in NTIES precludes drawing firm conclusions regarding relations between race/ethnicity and IPV victimization among SUD patients.

Both women and men who entered treatment for alcohol abuse (or alcohol and drug abuse) were more likely than patients entering treatment for drug abuse only to have been victimized by an intimate partner. Previous research suggests that alcohol use increases risk for IPV perpetration and victimization (Lipsky et al., 2005), but the mechanisms underlying relations between alcohol use and IPV victimization have yet to be explicated. Although the NTIES data do not allow us to establish temporal relations between IPV victimization and alcohol use, longitudinal research has found that victimization by an intimate partner increases risk for heavy drinking in women, suggesting that alcohol use may function as a means of coping with partner violence (Martino, Collins, & Ellickson, 2005). Alternatively, partner drinking patterns can be highly correlated (Leonard & Das Eiden, 1999), and the link between self-reported drinking and IPV victimization may be better accounted for by the perpetrator's alcohol use (Klostermann & Fals-Stewart, 2006).

Self-report of specific types of drug abuse was not associated with a higher rate of IPV victimization in this sample of SUD patients. It may be that IPV victimization is associated with higher rates of substance abuse in general, but not with specific SUDs. However, the generally high level of severity of substance use within the present sample may have limited our ability to detect associations between abuse of specific substances and IPV victimization. Having injected drugs was associated with IPV victimization for both women and men. This finding is somewhat consistent with research demonstrating that among women presenting to an emergency department, those who report IPV victimization are more likely to have visited a shooting gallery (i.e., a gathering place to inject drugs; El-Bassel et al., 2003). However, it is also possible that injecting substances is a marker for SUD severity, and patients with more severe SUDs may be at greater risk for IPV victimization.

Child physical and sexual abuse were both associated with IPV victimization for women and men. Women and men with a history of child abuse report greater acceptance of violence in intimate relationships, perhaps placing them at risk for IPV victimization (Ponce, Williams, & Allen, 2004). Even after adjusting for child abuse, IPV victimization was associated with symptoms of anxiety, depression, and psychosis in women and men. These findings contradict some previous research suggesting that IPV victimization is not

associated with mental health problems in men (Romito & Grassi, 2007). Although we cannot ascertain whether IPV victimization preceded the onset of mental health problems in this population, previous research suggests that, at least in young women, IPV victimization contributes to depression and anxiety symptoms (Ehrensaft et al., 2006).

Women and men reporting lifetime IPV victimization were more likely to report suicidal ideation and a lifetime suicide attempt, and men reporting IPV victimization were more likely to have attempted suicide in the past year. Findings are especially troubling given that the presence of an SUD may elevate risk for suicide above that observed in the general population (Wilcox, Conner, & Caine, 2004), suggesting an urgent need for suicide prevention interventions with SUD patients reporting IPV victimization. Patients with a history of IPV victimization may require a longer and more intense course of SUD treatment to remedy comorbid psychological problems and reduce the risk of suicide (Ilgen, Harris, Moos, & Tiet, 2007).

Interestingly, although both women and men reporting IPV victimization were at greater risk for physical health problems, the specific pattern of findings differed by gender. Women and men with a history of IPV victimization were more likely than patients without a history of IPV victimization to report recent circulatory and bone or muscle problems. Women with IPV victimization were also more likely to report neurological problems and men with IPV victimization to report respiratory problems. The physical health problems experienced by SUD patients with a history of partner violence could limit the efficacy of SUD treatment, particularly for patients with pain-related conditions or significant activity limitations. Whether these health problems are a direct consequence of IPV victimization (e.g., neurological problems secondary to traumatic head injury) or are mediated by other factors should be explored in future research. For example, recent research suggests that posttraumatic stress disorder may mediate relations between IPV victimization and physical health problems in women by compromising immune system functioning (Woods et al., 2005).

In addition to the health problems noted previously, women reporting IPV victimization were also more likely than women without IPV victimization to report an STD. Men who are physically violent with an intimate partner may also be more likely to coerce or force their partners to engage in risky sex (Dunkle et al., 2004). IPV victimization has also been linked to higher rates of prostitution (i.e., having sex for money or drugs) among women in methadone treatment (El-Bassel et al., 2000).

To our knowledge, this is the first large-scale study of SUD patients to examine the prevalence and correlates of IPV victimization for both women and men. However, some limitations should be noted. Because the definition of IPV victimization was limited to severe physical violence (i.e., "attacked or seriously beaten") and did not include more moderate forms of physical aggression or other forms of violence that often characterize abusive relationships (i.e., psychological, sexual), results may underestimate the prevalence of IPV victimization. As in other national surveys, data were not collected from partners, and the single-item measure of IPV victimization used in this study relied on participants' subjective judgment. The discrepancy in rates of IPV victimization between women and men may have been due to true gender differences in the prevalence of IPV victimization among SUD patients or to differences in the way women and men interpreted or responded to the IPV item. Men may have been less likely than women to conceptualize past incidents of partner-perpetrated violence as an "attack" or "serious beating," or they may have been more reluctant than women to disclose victimization. If the IPV item used in this study captured men who experienced the most severe forms of physical IPV victimization only, this could

account for why the present study found relations between IPV victimization and mental health problems in men in contrast to some previous research (Romito & Grassi, 2007).

Data were cross-sectional, and temporal relations among the variables cannot be established. It may be that alcohol abuse increases risk for victimization or that women and men use alcohol to cope with the trauma of victimization (Martino et al., 2005). Further, although there is evidence to suggest that IPV victimization adversely affects well-being (Ehrensaft et al., 2006), we cannot rule out the possibility that pre-existing psychological or physical health problems increased vulnerability to IPV victimization. Longitudinal research is also needed to test whether IPV victimization functions as a partial mediator of relations between child abuse and poor health.

Despite similarities in the correlates of IPV victimization, there may be important gender differences in the way IPV victimization is experienced or the context in which it occurs. In particular, women may be more likely to experience comorbid psychological abuse and to be injured during an IPV incident (Phelan et al., 2005). The absence of data on IPV perpetration in this study also limits the development of a comprehensive model of IPV in SUD populations. Finally, this study did not use standardized measures and relied on dichotomous indicator and criterion variables. Subsequent research would benefit from use of measures with established psychometric properties and from an examination of how the frequency and severity of IPV victimization impacts mental and physical health.

An understanding of the correlates of IPV victimization is essential to secondary and tertiary prevention efforts. Patients entering SUD treatment should be screened for a history of IPV and provided with interventions designed to educate them about healthy adult relationships. All SUD patients, but particularly women and men with an alcohol use disorder, could benefit from interventions aimed at promoting the formation and maintenance of sober intimate relationships. Brief, inexpensive interventions, such as providing patients with a referral card or a 20-minute case management session, have proven effective in reducing rates of revictimization among women in public health clinics (McFarlane, Groff, O'Brien, & Watson, 2006) and have the potential to further reduce rates of IPV victimization if adopted by SUD treatment facilities.

In summary, the prevalence of IPV victimization in this sample of SUD patients was high, particularly for women. Both child physical and sexual abuse were associated with IPV victimization, and in turn, IPV victimization was associated with a range of adverse psychological health problems for women and men, including depression, anxiety, and suicidality. Although IPV victimization was also correlated with a number of physical health problems, findings differed by gender. Men reporting IPV victimization were more likely than men without a history of IPV victimization to have respiratory, circulatory, and bone or muscle problems; women reporting IPV victimization were more likely than women without a history of IPV victimization to have circulatory, neurological, and bone or muscle problems and an STD. Interventions for reducing rates of IPV victimization among SUD patients are needed, as well as research on the efficacy of SUD treatment for patients with a history of IPV victimization.

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