

Regular article

Violence perpetration and childhood abuse among men and women in substance abuse treatment

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Abstract

Despite an association between violence perpetration and substance use, the characteristics associated with violence among patients in treatment for substance use disorders (SUDs) are not well documented. Data were gathered from a national sample of men ($n = 4,459$) and women ($n = 1,774$) entering SUD treatment on history of violence perpetration, exposure to childhood physical abuse (CPA) and childhood sexual abuse (CSA), and reasons for entering treatment. Rates of violence perpetration were high (72% of men, 50% of women), and violence was associated with being referred by family members, prior SUD treatment, CPA, and CSA. In multivariate analyses, CPA was a significant correlate of violence perpetration across gender; however, CSA was only significant among women. Findings highlight the need for increased screening and treatment of violence perpetration among patients with SUD and suggest that CSA may be an important correlate of violence perpetration among women. Published by Elsevier Inc.

Keywords: Substance abuse treatment; Violence perpetration; Childhood sexual abuse; Childhood physical abuse; Gender

1. Introduction

Violence perpetration (e.g., physical assault or battery on another person) is widespread among individuals with substance use disorders (SUDs; Chermack, Stoltenberg, Fuller, & Blow, 2000; Lisak & Miller, 2002). In one study, more than 75% of patients in SUD treatment reported perpetrating violence toward others (Chermack, Fuller, & Blow, 2000). Yet, despite evidence of the large scope of this problem, the

treatment needs and characteristics of individuals with comorbid violence and SUD are not well understood.

Childhood abuse exposure may represent a missing link in understanding both violence and substance use. Exposure to childhood abuse has been implicated in the development of SUDs (Boles, Joshi, Grella, & Wellisch, 2005; Clark, Masson, Delucchi, Hall, & Sees, 2001) and violent behavior (Chermack, Stoltenberg, et al., 2000; Lisak & Miller, 2002; Widom, 1989). However, the association between child abuse and violence among patients seeking treatment for SUD has received little attention. Overall, a better understanding of the psychosocial and historical risk factors that are associated with violence perpetration by patients with SUD could inform more effective and comprehensive treatments.

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Table 1
 Characteristics of men and women in substance abuse treatment by history of violence perpetration

Characteristics	Men (n = 4,459)			Women (n = 1,774)		
	% VIO (n = 3,212)	% NON (n = 1,237)	Effect size	% VIO (n = 895)	% NON (n = 876)	Effect size
Mean age (SD)	31.8 (8.5)	34.3 (8.3)	$t = 2.5^{**}$	31.1 (7.0)	32.9 (6.9)	$t = 5.1^{**}$
Has GED/HS diploma	57.9	61.0	$\chi^2 = 3$	46.6	53.4	$\chi^2 = 11^*$
Race/ethnicity			$\chi^2 = 3$			$\chi^2 = 3$
Non-Hispanic Black	53.1	51.5		64.0	59.8	
Hispanic	13.6	15.8		12.0	12.2	
Non-Hispanic, non-Black	33.3	32.7		24.0	28.0	
In jail or prison	33.8	29.8	$\chi^2 = 6^*$	10.3	8.1	$\chi^2 = 2$
Currently married	20.1	24.8	$\chi^2 = 11^*$	19.6	22.7	$\chi^2 = 2$
Has children	41.4	35.7	$\chi^2 = 13^{**}$	50.6	41.6	$\chi^2 = 15^{**}$
Treatment type			$\chi^2 = 12^{**}$			$\chi^2 = 5$
Outpatient	38.7	44.4		40.3	45.4	
Inpatient	61.3	55.6		59.7	54.6	
Seeking treatment for ^a						
Marijuana	20.9	14.4	$\chi^2 = 24^{**}$	12.0	8.1	$\chi^2 = 7^{**}$
Cocaine	34.9	31.4	$\chi^2 = 4$	32.3	30.6	$\chi^2 < 1$
Crack	23.6	24.9	$\chi^2 < 1$	44.9	41.2	$\chi^2 = 2$
Heroin	20.5	18.6	$\chi^2 = 1$	18.8	24.2	$\chi^2 = 7^*$
Alcohol	48.7	48.0	$\chi^2 < 1$	43.0	35.3	$\chi^2 = 11^{**}$
Had prior drug treatment	46.2	39.3	$\chi^2 = 17^{**}$	58.9	52.7	$\chi^2 = 7^*$
Treatment suggested by ^a						
Criminal justice system	28.0	26.7	$\chi^2 < 1$	16.2	14.4	$\chi^2 = 1$
Family member	33.9	29.9	$\chi^2 = 6^*$	43.0	37.1	$\chi^2 = 6^*$
Friend/coworker	8.3	9.5	$\chi^2 = 2$	9.1	7.6	$\chi^2 = 1$
Self	61.6	57.9	$\chi^2 = 5$	63.6	64.8	$\chi^2 < 1$
Reasons for treatment						
Legal problems	9.9	10.4	$\chi^2 < 1$	7.5	7.1	$\chi^2 < 1$
Relationship problems	8.4	8.4	$\chi^2 < 1$	7.7	6.4	$\chi^2 = 1$
Parenting issues	8.7	7.2	$\chi^2 = 3$	26.8	21.1	$\chi^2 = 8^*$
Health issues	6.0	6.4	$\chi^2 < 1$	6.0	5.4	$\chi^2 < 1$
Abuse history						
CSA	5.3	3.1	$\chi^2 = 10^*$	33.7	20.0	$\chi^2 = 42^{**}$
CPA	44.5	19.0	$\chi^2 = 248^*$	36.3	19.0	$\chi^2 = 66^{**}$

Note. VIO = lifetime history of violence perpetration, NON = no lifetime history of violence perpetration, GED/HS diploma = general equivalency degree or high school diploma.

^a Categories are not mutually exclusive.

* $p < .01$.

** $p < .001$.

A wealth of research links prior violent victimization to the development of SUDs (Chermack, Stoltenberg, et al., 2000; Easton, Swan, & Sinha, 2000; Farley, Golding, Young, Mulligan, & Minkoff, 2004; Velez et al., 2006). Studies also suggest that exposure to violence may impact the severity and course of SUD. Exposure to sexual and physical abuse and resulting psychological symptoms such as posttraumatic stress disorder (PTSD) and depression have been linked to more severe patterns of use among those with SUDs (Clark et al., 2001; Easton et al., 2000). Farley et al. (2004) found that the risk of relapse rose as the number of different forms of trauma increased. Such findings have prompted the development of empirically validated treatments and the modification of current SUD programs to address trauma-related psychopathology among patients with SUD (Najavits, Schmitz, Gotthardt, & Weiss, 2005; Najavits, Weiss, Shaw, & Muenz, 1998; Ouimette, Moos, & Brown, 2002).

Research examining the correlates of violence perpetration among patients with SUD is relatively new but suggests

that childhood abuse may represent an important risk factor for subsequent violence toward others. Two studies document associations between exposure to family violence and the perpetration of intimate partner violence (Easton et al., 2000) and other forms of violence perpetration (Chermack, Stoltenberg, et al., 2000) among patients with SUD. Although studies of non-SUD samples have indicated a specific link between exposure to childhood physical abuse (CPA) and the development of violent offending (English, Widom, & Brandford, 2001; Maxfield & Widom, 1996), we know of no studies examining the link between CPA (as oppose to general family violence) and violence among patients with SUD. In one of the only studies to examine the correlates of violence perpetration among patients in SUD treatment, Chermack, Fuller, et al. (2000) found that violence perpetration was associated with differences in several characteristics, including younger age, marijuana use, and cocaine use; but they did not assess prior treatment experiences or exposure to CPA.

The association between childhood sexual abuse (CSA) and violence perpetration among patients with SUD has received even less empirical attention. Within samples of maltreated or incarcerated individuals, CSA has shown an inconsistent relationship with violence. English et al. (2001) found that CSA was associated with an increased risk of violent offending in a mixed gender sample, but other studies did not find a significant association (Maxfield & Widom, 1996; Widom & Ames, 1994). Some researchers have suggested that the mixed pattern of findings is due to a gender difference in the impact of CSA on violence, which is diluted or masked among mixed gender or all-male samples. In support of this hypothesis, they note findings from samples of high-risk girls that show CSA to be a stronger predictor of later violent offending than CPA (Herrera & McCloskey, 2001).

In summary, violence perpetration is common in patients presenting to SUD treatment, and research suggests that it could be even more common among those with a history of childhood physical and sexual abuse. However, gender differences exist in both of these areas; sexual and physical abuse appear more common among women in SUD treatment (DiNitto, Webb, & Rubin, 2002; Najavits, Weiss, & Shaw, 1997), whereas severe violence perpetration is more common among men (Chermack, Stoltenberg, et al., 2000). Therefore, studies examining violence perpetration and its associated characteristics among patients with SUD require sizable samples of men and women. This study examined the rates of violence perpetration and clinically relevant treatment characteristics associated with violence perpetration among a large national sample of men and women entering SUD treatment. Given evidence of an association between childhood abuse, SUDs, and violence, we sought to identify which types of abuse experiences (CPA, CSA) were associated with violence perpetration among men and women presenting for SUD treatment.

2. Methods

This study consisted of secondary data analyses of the National Treatment Improvement Evaluation Study (NTIES). NTIES was a longitudinal, multisite evaluation of SUD treatment programs funded by the Center for Substance Abuse Treatment, an agency of the Substance Abuse and Mental Health Services Administration, U.S. Department of Health and Human Services. For further information on NTIES sampling and procedures, see Gerstein et al. (1997). This study was conducted in accordance with approval from the Stanford University Institutional Review Board.

2.1. Procedures

Participants completed a structured, computer-assisted interview upon entry to a SUD treatment program. Interviews were approximately an hour in duration and were

conducted by trained research staff. Participants reported on age, race/ethnicity (non-Hispanic non-White, non-White Hispanic, and non-Hispanic White), education (no high school diploma or general equivalency degree [GED]/high school diploma), current marital status, and whether they had children. Participants were also asked about prior treatment experiences, the source/s that referred them or recommended they seek treatment, and their reasons for seeking treatment. Data on incarceration status (jail/prison vs. not incarcerated) and which substances they were entering treatment for were also gathered. All individuals who were 18 at the time of entry into the study were included in the analyses, resulting in a sample of 1,774 women and 4,459 men. Descriptive information on the sample is shown in Table 1.

Childhood abuse exposure was assessed via self-report. To measure CPA, we asked participants whether they had ever been “seriously hit or beaten or attacked with a weapon (such as a knife or gun)” or “hit or beaten so seriously that you were badly bruised, had to see a doctor, or had to stay in bed for one day or more” before the age of 18. CSA was assessed by asking whether participants were ever forced (e.g., physical force or threatening harm of victim or someone close to victim) to have sex (e.g., vaginal, oral, or anal intercourse) before the age of 18. Similar methods and definitions have been used in other large-scale studies of abuse exposure (Whitfield, Anda, Dube, & Felitti, 2003; Nelson, Heath, & Madden, 2002).

Violence perpetration was defined as any serious act of violence toward another person. Specifically, participants were asked whether they had ever engaged in the following acts of violence: (a) rape (forced someone to have sex), (b) battery or threats with a weapon, (c) physical assault (beat someone up), (d) mugging (used a weapon to steal), (e) murder (deliberately killing someone), or (f) deliberately inflicted severe injury on someone using other methods. Endorsement of any of these behaviors resulted in the classification of the participant as having a history of violence perpetration. Self-report has been recognized by the National Institute of Justice as a reasonably valid and accurate method of assessing violence, although it may underestimate the true prevalence of these behaviors (Thornberry & Krohn, 2000).

2.2. Statistical analysis

Analyses were conducted using SPSS version 11.5. Chi-square tests yielded significant gender differences in the prevalence of CSA, CPA, and violence perpetration, justifying the need to stratify analyses by gender. First, we examined the univariate associations between demographic factors, treatment-related variables, CSA, CPA, and the report of lifetime violence perpetration. Bivariate analysis of predictor variables (e.g., CSA, CPA) confirmed that the data met the assumptions required of logistic regression (adequate group sizes for each combination of variables and low multicollinearity; Tabachnick & Fidell, 2001). For primary

Table 2
Age-adjusted logistic regressions predicting likelihood of violence perpetration for men and women by type of childhood abuse

Variables	Men (n = 4,459)				Women (n = 1,774)			
	b	SE	Adj. OR	99% CI	b	SE	Adj. OR	99% CI
Age	-0.02	<0.01	0.98	0.97–0.99	-0.03	0.01	0.97	0.95–0.99
CSA	0.29	0.19	1.34	0.83–2.15	0.48	0.12	1.61 *	1.18–2.20
CPA	0.78	0.19	2.17 *	1.35–3.50	0.70	0.12	2.02 *	1.48–2.76
CSA × CPA	-0.82	0.37	0.44	0.17–1.15	-0.02	0.24	0.98	0.52–1.83

Note. CSA × CPA = interaction term for CSA and CPA, Adj. OR = adjusted odds ratio, CI = confidence interval.

* $p < .01$.

analyses, chi-square tests were used to compare those with a history of violence perpetration to those without a history of violence on demographic, treatment-related characteristics and history of abuse, stratified by gender. Multivariate logistic regressions with zero-centered interaction terms were used to predict violence perpetration status as a function of CSA, CPA, and a CSA × CPA term, after adjusting for age. Alpha was set a priori at $p < .01$ due to the large sample size.

3. Results

Most (72.2%) men and half (50.5%) of women reported a history of violence perpetration, and rates of violence were significantly higher in men than in women ($\chi^2 = 265$, $df = 1$, $p < .001$). Men were more likely than women to report each form of violence, including rape (4.8% vs. 1.8%, $\chi^2 = 29$, $df = 1$, $p < .001$), battery or threats with a weapon (38.6% vs. 26.7%, $\chi^2 = 77$, $df = 1$, $p < .001$), physical assault (66.7% vs. 41.7%, $\chi^2 = 329$, $df = 1$, $p < .001$), mugging (25.8% vs. 10.0%, $\chi^2 = 188$, $df = 1$, $p < .001$), murder (3.2% vs. 1.0%, $\chi^2 = 24$, $df = 1$, $p < .001$), and other severe injury to someone (29.9% vs. 18.2%, $\chi^2 = 88$, $df = 1$, $p < .001$).

Table 1 displays the sample characteristics by violence perpetration status and gender. Men with a history of violence were likely to be younger, incarcerated, unmarried, and have children. Violence perpetration in men was also associated with current entry to an inpatient or residential SUD treatment program and seeking treatment for marijuana use. Men with a history of violence were more likely to report that they had been in SUD treatment before and that treatment had been suggested by family members, but they did not differ from men without a history of violence in their reasons for entering treatment (e.g., legal, relationship, health, or parenting issues). Men with a history of violence were more likely to report CSA and CPA.

Among women, violence perpetration was associated with younger age and having children. Although differences were not observed for the type of program women were currently entering, those with a history of violence were more likely to report seeking treatment for marijuana and alcohol but less likely to report heroin as a problem substance. Women with a history of violence perpetration were more likely to state they had been in SUD treatment

before and that treatment was recommended by family members. Women with a history of violence were also more likely to report parenting issues (i.e., wanting to be a better parent) as a reason for wanting SUD treatment and reported higher rates of CSA and CPA than their peers.

In multivariate models (see Table 2) adjusting for age and exposure to both forms of abuse, the adjusted odds of violence perpetration increased two-fold for men with a history of CPA, but CSA and the interaction of CSA × CPA were not significantly associated with violence. Among women, the adjusted odds ratio of violence perpetration was two times higher for those with a history of CPA and 1.6 times higher for those with a history of CPA. Once again, the interaction term of CSA and CPA was not significant.

4. Discussion

Among a large national sample of patients seeking treatment for SUDs, violence perpetration was highly prevalent among both men and women. Although the context surrounding the violence perpetration is unknown, the seriousness of the behaviors assessed (e.g., mugging, physical assault, battery, rape) in this study suggests both clinical and legal significance. The gender difference in the violence reported by men and women in our sample is not surprising. Severe violence and violent offending appears more common in men (Federal Bureau of Investigation, 2005) despite the fact that studies assessing milder forms of aggression, particularly in the context of intimate partner relationships (e.g., slapping, kicking, hitting), tend to find gender equivalence (Archer, 2000). Altogether, the rates of violence perpetration seen in our sample are consistent with existing literature and only underscore prior recommendations for the need to screen for violence perpetration among men and women upon entry to SUD treatment (Chermack, Fuller et al., 2000). In addition to screening, it remains essential for SUD treatment providers to understand and address the larger context in which violence occurs. Increasingly, research suggests that to do so, treatment programs need to incorporate services geared toward the wide variety of comorbid problems faced by this group (e.g., trauma, PTSD, anxiety, parenting issues, impulsivity).

Toward this aim, our findings indicate that after adjusting for other forms of exposure and age, CPA was associated

with violence perpetration in men and women, but CSA was only associated with violence in women. The implications of these findings are two-fold. First, they replicate findings from other high-risk groups, linking physical abuse in childhood to violent behavior (English et al., 2001; Maxfield & Widom, 1996). Although no causal link can be made between CPA and violence in our sample, the strength of the observed relationship suggests that the integration of treatment for trauma into SUD programming may have particular relevance for individuals who exhibit violent behavior. Other researchers suggests that patients with a history of trauma benefit from treatment that considers the continuing impact of prior trauma on substance use and current functioning (Farley et al., 2004; Lisak & Miller, 2002; Najavits et al., 1998; Ouimette et al., 2002). Second, the observed association between CSA and violence perpetration in women is consistent with Herrera and McCloskey's (2001) hypothesis that CSA represents a salient risk factor for violence in women, even after accounting for other forms of maltreatment. Although we did not find a CSA–violence link among males in our sample, further studies are needed to clarify whether specific facets of abuse that differ by gender may be particularly predictive of violence perpetration. Specifically, differences in age of exposure, relationship between victim and abuser, and chronicity of abuse could be examined as they relate to the prediction of violence across gender.

In addition to childhood abuse exposure, there appear to be many clinical characteristics associated with violence perpetration that could inform SUD treatment efforts. Among our sample, violence perpetration in men and women was associated with being referred for treatment by family members and was more common among those with children. Together, these observations suggest a need to better address the concerns of this population as they are likely to affect not only patients but also their families. In addition, the finding that those with a history of violence perpetration were more likely to have been in treatment before suggests a need to better understand how violence interacts with the treatment of SUD. For example, studies examining whether violence is associated with increase rates of treatment failure, whether more doses of SUD treatment are needed for this population, or whether violent behavior itself interferes with the completion of SUD treatment programs are needed. In a study examining follow-up data from NTIES, Orwin, Maranda, and Ellis (2000) found that a year after discharge from SUD treatment, violent offending actually decreased among this sample. These findings are promising with regard to the ability of SUD treatment programs to reduce future violence. However, studies with longer follow-up times and more detailed information are needed and should consider whether outcomes differ depending on whether one has been exposed to CPA or CSA.

This study employed a conservative approach of examining only broad relationships between abuse exposure and lifetime violence perpetration within a cross-sectional

framework. Therefore, it is not possible to know the extent to which the observed associations between CPA, CSA, and violence perpetration reflect the causal influence of these childhood experiences on subsequent violent behavior. The representativeness of our sample allows some confidence in the generalizability of these findings to individuals with SUD and the large scope of the study allowed examination of important but low base rate phenomenon (e.g., CSA in men). However, although the sample size allowed for examination of the relationship between violence, CPA, and CSA, it was not a large enough sample to allow for examination of these relationships by type of violent behavior (e.g., rape vs. assault). In addition, although this study measured aspects of substance use severity at baseline, it was not designed to delineate the association between concurrent use of substances and violent behavior. Thus, the extent to which violence occurred within the context of substance use is unknown. In addition, the use of self-report methods to assess antisocial behavior, although acceptable, may have underestimated violence in our sample. Still, given the high numbers reported among our sample, the data suggest violence perpetration is an important issue among patients with SUD.

Finally, although multivariate analyses adjusted for exposure to CPA and CSA, many other mediating and/or moderating variables not assessed in this study may better explain the association between abuse and violence. For example, future research should examine how aspects of abuse (e.g., chronicity, age of event) and individual psychopathology (e.g., presence of PTSD symptoms related to abuse) relate to the timing of violent behaviors. Specifically, this study did not differentiate between abuse that occurred in early childhood and adolescence, nor were we able to collect information on the relationship between abusers and victims (e.g., family member vs. stranger); both characteristics are likely to influence the long-term effects of abuse exposure.

Our findings highlight the issue of violence perpetration by men and women seeking SUD treatment and suggest several correlates of violence that could inform more comprehensive SUD treatment programming. Providers may want to build on the recommendations of Fals-Stewart and Kennedy (2005), who call for SUD programs to make more of an effort to address domestic violence as part of substance abuse treatment. Our findings suggest this need may extend to violence more generally, and that to address violence, multiple issues may need to be considered, including past victimization and factors that mediate the relationship between abuse, violence perpetration, and substance use (e.g., etiological risk factors, psychopathology). The integration of promising new treatments designed to address SUD and trauma (Najavits et al., 1998) and/or modification of current programs to better meet the multifaceted needs of patients with a history of violence should both be explored. Further replication and extension of these findings will be an important step toward

addressing the needs of individuals exhibiting SUD and violence perpetration.

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