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Prevalence of Past Year Assault among Inner-City ED Patients

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Abstract

Objectives—1) To determine the rates of past year non-partner violent assault (NPV), both victimization and aggression. 2) To assess variables associated with NPV, particularly with regards to substance use.

Method—A cross sectional computerized standardized survey study was conducted to assess NPV, physical and mental health, and substance use among patients presenting to an inner-city ED over two years. Patients (age 19–60) with normal vital signs in an urban ED from 9am–11pm were eligible; pregnant patients and those with a chief complaint of psychiatric evaluation were excluded. Logistic regression analyses were conducted to predict any NPV

Results—10,744 patients were enrolled (80 % response rate); 14% of the sample reported any past year NPV (9% perpetration; 11% victimization). Findings from regression analyses found participants with any past year NPV (victimization or aggression) were more likely than their counterparts to be younger (OR 1.1), male (2.2), single (1.5), unemployed (1.1), present to the ED for injury (1.9), report poor physical health (1.32) poor mental health (1.9). They were less likely to be African-American (0.8). Alcohol use (1.7), marijuana use (2.4), cocaine use (3.1), prescription drug use (1.4) and past treatment (1.7) were associated with experiencing past year NPV.

Conclusions—Fourteen percent of patients seeking care in this inner-city ED experience violence with a non-partner. Substance use and cocaine specifically, was the strongest predictor of any NPV.

Background

Each year more than 37 million patients visit emergency departments (EDs) with injuries.[1] Of these visits, approximately 17% are related to violence or assault. Research from multiple disciplines suggests that violent injury is non-random and is best predicted by the past experience and behavior.[2] Among fatal injuries, 20% are related to interpersonal violence.[3]

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Assault-related injuries have reached epidemic numbers, exceeding 2 million persons annually[4] with homicide a leading cause of death among young adults.[5] Often, in non-intimate partner violence, the victim and assailant know each other, with friends or relatives involved in the majority of gun-related violence.[6–8] Nationally more individuals report victimization by friends or acquaintances, then by spouses or dating partners.[9] Among women in the ED, prior research finds that half of assault-related injuries were perpetrated by a non-partner,[10] underscoring the importance of understanding violence outside of intimate partner relationships.

A potentially critical factor in violence is alcohol and illicit drug use.[11, 12] High rates of alcohol use and alcohol intoxication at the time of the event were found among individuals incarcerated for violent offenses.[13, 14] Among cocaine users in the ED, Cunningham et al. (2007)[15] found non-partner violence (NPV) was significantly related to greater binge drinking, diagnosis of substance or dependence, greater legal involvement, and higher rates of seeking medical attention for intentional injuries. Chermack et al. (2001)[16] found significant associations between NPV and demographic variables (e.g., minority status, years of education), days of substance use (e.g., cocaine), and overall psychological distress in a substance use treatment sample. To date, no ED-based studies have evaluated violence in a non-partner context among a general sample of ED patients.

Importance

Although there has been an increase in the number of studies on violent assault (both aggression and victimization) and substance use among ED patients, most of the violence related research has focused on intimate partner violence (IPV).[17–19] Patients who are admitted to a trauma service overnight following a violent injury have been found to have a high risk of adverse outcomes in the subsequent year with one study reporting that 13% were incarcerated, 44% experienced a repeat violent injury, and 20% were victims of homicide.[20]

Other ED-based studies of violent injury among non partners have focused only on patients injured severely enough to require a trauma consult or hospital admission, thus missing a huge section of the injured population who are treated and released. Furthermore, prior research on non-IPV has focused on the injury (laceration, gun shot wound, or contusion) that brought the patient to the ED, thereby limiting the ability to understand other recent episodes of violence. Data are lacking on the involvement of violence among the majority of patients treated in an inner city ED for medical illness or non life threatening injury, which would inform injury prevention efforts. The ED presents an opportunity to interface with patients at high risk for violence. This ED visit may be the only health system interaction prior to interfacing with the criminal justice system; yet, currently little is known about the prevalence or characteristics of violence among non-partners seeking ED care for injury or illness.

Although many patients with violent injuries from an assault are victims experiencing an isolated tragic event, others may be recurrently involved with violence and could benefit from targeted referral-based interventions appropriate to their history and risk factors. For example, studies have demonstrated that the psychological and descriptive profiles of both assailants and victims of intentional injury are quite similar; frequently the victims are the offenders in other assaults.[21, 22] Patients involved in violence in non-partner relationships are also likely to be involved in aggression or victimization in partner relationships.[23, 24] Data regarding the relationship between violence and substance use in a consecutive sample of patients presenting over a two-year period to an inner city ED could provide valuable information to determine the need for, and content of, future violent injury prevention programs.

Goals of This Investigation

The primary aims of this study were: 1) To determine the prevalence of past year non-partner violent assault (NPV), both victimization and aggression, and, 2) To assess variables associated with NPV, particularly with regards to substance use.

The prevalence of NPV in national surveys appear to be equal to or greater than IPV rates.[8, 9] It is critical to understand the experiences with NPV among adult ED patients to better inform the assessment, treatment, and prevention of violence-related injury. Specifically, based on previous research, we hypothesized that male gender,[16] younger age,[25, 26] unemployment,[27, 28] fewer years of education,[27, 29] and less income[16] would be associated with NPV. We expected that both poorer mental and physical health would be associated with NPV.[30, 31] Finally, given findings from clinical and laboratory research,[32, 33] we hypothesized that participants with a past year history of NPV would be more likely to have used alcohol, cocaine, cannabis, and/or prescription drugs (opiates/ depressants sedatives), compared to those with no NPV.

Methods

Study Design

An observational cross-sectional survey study was conducted. Patients (ages 19–60) seeking care for injury or medical complaints were approached by research staff to participate in this computerized survey study. Bachelor level research staff recruited patients who were in treatment spaces in the ED from 9am – 11pm, seven days a week over a full two-year period. This does not include patients treated at study ED on days not covered by research recruiting staff (excluding major holidays, RA vacation days, RA sick days). During hours when an RA was present, consecutive patients in treatment spaces were systematically sampled. After obtaining written consent, the 10–15 minute screen was administered to eligible patients.

Setting

The study site was an inner-city Level 1 trauma center ED in Flint, Michigan, with an annual ED census of approximately 50,000 adult patients (of which ~50–60 % are African American). Hurley Medical Center is the only public hospital in the city. Flint is comparable in terms of poverty and crime to the other urban centers such as Detroit, Hartford, Camden, St Louis, Oakland.[34] The population of Flint is 50% African-American.[35] The study protocol was approved by Institutional Review Boards (IRB) for Research with Human Participants at the University of Michigan and the Hurley Medical Center; Certificates of Confidentiality were obtained from NIAAA and NIDA.

Selection of Participants

All potentially eligible adult patients presenting to the ED for medical illness or injury were approached to complete a computerized survey as part of a larger randomized controlled trial linking patients to substance use treatment. Patients who were ambulatory or arrived by ambulance were eligible, providing they were not triaged to the resuscitation bays. Patients were excluded if they were pregnant, had abnormal vital signs, or were unable to provide informed consent (e.g. unconscious, police custody). Patients seeking care solely for psychiatric evaluations (i.e. chief complaint suicidal ideation, psychosis) were not eligible. In this manner, this study focuses on the rates of violence and substance use among patients who would not receive further mental health evaluation or intervention in the ED. Patients who were acutely intoxicated at the initial ED presentation were approached following clearing of mental status. Patients who declined to participate provided their gender and race as well as reasons for refusing to participate. (Our IRB did not allow collection of additional data regarding

patients who declined participation without written consent.) Data for this paper were obtained for two full years of recruitment (April, 2006 –March, 2008).

Methods of Measurement

Potential NPV risk domains were selected based on theoretical models of violence and prior findings,[33, 36–39] and included demographics (age, minority status, gender), health factors (physical and mental health history), and substance use history (i.e., alcohol, cocaine, cannabis, past 3-month treatment) factors (see Appendix A for theoretical model).

Participants completed a computerized survey, with aid from a RA if needed, regarding demographics (age, gender, race/ethnicity, marital status, income, and years of education completed),[40] health status, substance use, and violence (see Appendix B for survey). The survey took ~10–15 minutes to complete and was in English only (consistent with the study site population). Participants completed the survey in a treatment room. The site IRB did not allow surveys to be completed in the waiting room. RA staff paused the computer when medical staff was present or if participant went to testing, and was available to answer questions. The survey did not impact patient flow.

Assault: NPV victimization and aggression—NPV victimization was assessed by one item from the Partner Violence Screen (PVS)[41] and adapted for non-partners: “In the past year, have you been hit, kicked, punched, or otherwise hurt by friends, strangers, neighbors, people in bars, coworkers, bosses?”. In a similar manner, NPV aggression was assessed by asking: “In the past year, have you hit, kicked, punched, or otherwise hurt friends, strangers, neighbors, people in bars, coworkers, bosses?” Although this one item screen has not be validated, the full length PVS has adequate sensitivity (54.5–71.4) and specificity (80.3–84.4) as compared to more lengthy measures for use in ED settings.[42]

Physical and Mental Health Functioning—The SF-12 Health Survey which has been validated in an ED setting[43] was used to assess physical and mental health functioning over the prior 4 weeks.[44–46] For analysis purposes, a cut-off at the 25th percentile on the SF-12 was used to indicate low/high functioning in each domain.

Alcohol and Drug Use—Frequency of substance use (past 4 weeks) and related symptoms of abuse/dependence were determined by items from the Substance Abuse Outcomes Module[47] The SAOM was used to measure alcohol and drug use (illicit and prescription use) along with questions to ascertain separate DSM-IV diagnoses for alcohol, cocaine, and marijuana abuse and dependence. Prescription drug use included: *Opiates (i.e.* Morphine, Codeine, Vicodin, , OxyContin, Darvocet, Percodan, Fentanyl, etc) and *Sedative/Depressants (i.e.* , Xanax, Librium, Quaaludes, Halcion, sleeping pills, nerve pills, downers, barbiturates etc). One additional item from the SAOM investigates the timing of substance use and fighting “I got into physical fights while using alcohol or drugs”. The SAOM has demonstrated reliability (internal reliability coefficient 0.58–0.90, test-retest reliability 0.56–0.99) and validity (concurrent validity 0.5–0.8, predictive validity 0.5–0.9).[47]

In order to tease apart differential effects of the most commonly used substances (alcohol, marijuana, and cocaine) in our sample, we constructed the following three variables: alcohol use only (these patients did not use marijuana or cocaine), marijuana use (with or with out alcohol), and cocaine use (with or without marijuana or alcohol). This 3 category approach was chosen to represent an increasing severity of substance use (patients with any cocaine use are hypothesized to be a different patient population then those who report, any marijuana use without other illicit drugs, or alcohol alone without illicit drug use). Participants also reported if they had been in treatment for substance use in the past 3 months.

Chief Complaint—Trained research staff recorded the reason for the current ED visit (medical or injury) at the time of the survey administration as stated by the patient. Patients were not asked if their visit was the result of violence.

Data Analysis

Data analyses were conducted with SAS version 9.1 for Windows (Cary, NC). Responses to demographic responses were dichotomized into the following categories for analysis: African American (yes/no); married/ living together (yes/ no); any college education or more (yes/ no); income less than $20,000 (yes/no), health insurance (yes/ no), employed (yes /no). Age was analyzed as a continuous variable. Demographic variables were dichotomized to ease clinical interpretation, based on the current literature on NPV and substance use.[26, 28, 48]

First, we present prevalence of past year assault (NPV) in this sample. Second, characteristics of patients with and without past year NPV victimization, and with and without NPV aggression are presented. Third, due to the similarity of victimization and aggression results, these variables were collapsed into any NPV, and bivariate associations evaluating participants with and without any non-partner violence were conducted. Finally, three separate logistic regression analyses were conducted to predict: any NPV (presented in main results), non-partner aggression, and non-partner victimization. See technical Appendix C for details of analysis, handling of missing values, and regression diagnostics.

Results

During a two-year period of recruitment, 13,493 patients were approached, 80% (n=10,744) consented to participate in screening; 20% (n=2,749) declined. Figure 1 illustrates patient flow. Among those who declined, 46% were male and 55% were African American.

Characteristics of Study Participants

On average, the study participants were relatively young (mean age=36.4 years, SD=11.5), female (56%), and 56% African-American (40% Caucasian, 3% other races). Typical of the study city, only 2% of sample was Hispanic/Latino. The proportion of subjects who declined participation did not differ by sex or race. Just over a quarter (27%) presented to the ED for an acute injury. Sixteen percent of the total sample met DSM-IV criteria for either abuse or dependence on alcohol or illicit drugs.

Main Results

Prevalence of NPV—Overall 14% (n=1475) of patients surveyed seeking ED evaluation reported violence with a non-partner in the past year (Table 1). Among participants reporting NPV, 42% (n=618) experienced both victimization and aggression, 21% (n=315) reported only aggression and 37% (n=542) reported only victimization. The majority of those reporting NPV were men; however, more than 1/3 of those (38%) experiencing NPV were women. In addition, men accounted for 64% (738/1160) of the NPV victimization reported and 65% (609/933) of the NPV aggression.

NPV Aggression & Victimization—Results of parallel bivariate analyses of participants, who engaged in NPV aggression compared to no NPV, and NPV victimization compared to no NPV, were similar (Appendix D). Therefore, further analysis presented here focus on any NPV (collapsed victimization and aggression).

Description of Participants with NPV and no NPV—Characteristics of patients with and without NPV are presented in table 2. Participants with past year NPV presented more often to the ED for an injury than a medical complaint; among participants presenting for injury,

21% (n=622/2936) reported past year NPV. Twenty percent of participants with past 30 day any prescription drug use note NPV (17 % of those with NPV report prescription opiate use, 7 % of those with NPV report prescription sedative use). Twenty five percent (n=365) of those with NPV noted they "got into physical fights while using alcohol or drugs" within the past year as compared to 2% (n=206) of those without NPV.

Logistic Regression Analysis Predicting NPV

Logistic regression models predicting involvement in past year NPV were conducted with all variables entered simultaneously. The model was significant (χ^2 (15) = 1143.82, p<.0001) (Table 3). Participants who experienced past year NPV had twice the odds of being male or seeking ED care for an injury. They were younger, less likely to be African American, living with a partner or employed, and had an increased association with poor physical and mental health. Regarding substance use, any use of cocaine increased the odds of NPV by 3 times (2.41, 3.98) with NPV. In addition to that, alcohol, marijuana and prescription drug users were also more likely to increase the odds of NPV. Having substance use treatment in the past 3 months was associated with (OR 1.7) with NPV.

Parallel regressions analyses predicting non-partner victimization and aggression separately were also performed. The pattern of results was consistent across victimization and aggression; all models were significant and the findings for victimization and aggression did not differ from the findings of overall NPV (see appendix D).

Limitations

Although this study presents important information on the prevalence of NPV in an ED sample, there are several limitations that need to be addressed. First, given the cross-sectional design of this study and the mixed time frames assessed by various instruments, it is impossible to infer causality or temporal relationships of the associations found between NPV and associated correlates. Second, findings from this inner-city ED may not be generalizable to EDs outside of this setting, especially those in areas that substantially differ from where this study occurred (e.g., rural settings), and implication for screening and intervention may not apply in those settings. Third, the shortened version of the PVS requires validation and may be less sensitive then the full PVS. This brief measure, along with the exclusion of pregnant patients, those presenting with psychiatric chief complaints, and those presenting overnight, may potentially underestimate the frequency of NPV in the sample. Fourth, the analysis does not include an interaction term to address the possible interaction of substance use and mental health, which may lead to biased estimates. Fifth, data is self reported; however, recent reviews have concluded that reliability and validity of self-reported alcohol, tobacco, and other drug use is high,[49–53] and patients are more likely to report drug use using computerized surveys and when privacy/confidentiality is assured.[54–56] Fifth, although assessment of NPV was conducted using brief, self-administrated questions which maximize feasibility in a study of over 10,000 ED patients, replication of these findings with longer, more detailed instruments (e.g., Revised Conflict Tactics Scale II;[57] Timeline Aggression module[29]) and multiple study sites is needed.

Discussion

This study represents one of the first to examine past year assault among a large consecutive cohort of medical and injured ED patients. This data suggest that a significant proportion of patients presenting to an inner-city ED have been involved in violence with a non-partner in the past year: 14% of all patients sampled and 21% of injured patients sampled. The prevalence of NPV found in this sample is higher than NPV prevalence found in community samples (e.g., 5.6%)[58] and is equal to or higher than studies assessing past year IPV in the ED setting,[59, 60]

This data suggests that more patients who are experiencing NPV (42%) are experiencing both non-partner victimization and aggression than either type of non-partner violence alone (e.g., episodes of being the aggressor *and* being the victim). Of note, however, is that the context in which the aggressive behaviors occurred was not assessed; it is not clear whether the aggression and victimization occurred with the same person, as part of the same conflict, or with different people. Further, there is no way to ascertain if the participant was acting in self-defense. Despite this, the correlates of victimization and aggression of violence are very similar, supporting the concept of the cycle of violence or bi-directionality (for review see Straus, 2007[61] or Daday et al. 2008[21]).

Although men reported higher rates of NPV than women, many women also reported violence (victimization and aggression) in non-partner relationships. Prior work suggests that patients who are experiencing NPV may also be experiencing violence in their intimate relationships.[23, 62] The elevated prevalence of NPV found in this study suggest that the ED may be an ideal venue in which to identify and intervene with NPV, as is done routinely for IPV. For example, identification and intervention with men experiencing NPV may be protective in their current or future relationships, and advance intimate partner violence prevention efforts as well as decrease the individual's future injury-related morbidity.

Although some research suggests that correlates of violence are similar for partner and non-partner violence (e.g., age, alcohol/drug problems, overall mental health),[63] others note subtle differences in violence depending on relationship type, gender, and psychiatric status.[62, 64] For example, prior research in substance use treatment settings and ED samples find that men report greater NPV than women.[16, 31, 39] As noted by Graham and Wells (2003),[65] male violence may be seen as more normative and acceptable than female violence in certain social settings (e.g., bars) and may also be related to concepts such as "face saving" and not wanting to "back down" from a violent confrontation, particularly when in the presence of others.

Although the temporal association of violence and the substance use reported in this study is not known, substance use and violence often co- occur in individuals, and often neither the violence nor the substance use are isolated events. Criminal justice data note that 5% of assailants were reportedly under the influence of drugs at the time of their crime.[66] Findings indicated that a quarter of the participants noted that they have experienced fighting (relationship type not specified; non- partner, or partner) while using alcohol or drugs. These findings are in keeping with clinical and laboratory studies, which have generally found a relationship between physical aggression, alcohol, and cocaine.[29, 33, 67, 68]

More specifically, studies have demonstrated that alcohol and cocaine use are related to the frequency with which aggression occurs and the severity of the injuries sustained.[69–73] There is evidence to suggest that the acute pharmacological effects of cocaine may increase aggressiveness.[67] Non-ED studies have found evidence for acute cocaine consumption and aggression.[29, 74] Marijuana use is also related to both aggression and victimization (for a review see Hoaken et al., 2003[75]); this association is likely due to contextual factors and self-selection/ self-medication, as well as to marijuana withdrawal.[76]

Theories focusing on the relationship between alcohol and other drug use and violence highlight the role of a variety of risk domains, including acute intoxication effects, social/ contextual factors (relationship type, partner/non-partner), and other individual difference factors (gender, depression).[33, 77] In general, substance users (particularly cocaine users) are frequent victims of violence[71, 78] and are at increased risk for injuries sustained while under the influence. The relationship of substance use and violence are unlikely to be solely explained by the pharmacology of the drug. The exacerbated rates of violence experienced by substance users are likely not solely related to the timing of intoxication, but rather to clustering of high

risk behaviors in the individual. For example, obtaining and/or using illegal substances involve a social/environmental context with people and places where NPV is likely to occur. Baskin-Sommers (2006)[79] have suggested that aggression may be partially explained by the tendency of drug users to become more exposed to and desensitized by violence due to interacting with individuals already immersed in a violent drug culture. Thus, there may be greater opportunities for users of illicit substances to be experience violence, regardless of whether they were intoxicated at the time of the occurrence of violence. These assertions require validation with studies using calendar approaches to tease out the influences of acute consumption and NPV.[29, 74]

To the best of our knowledge, this is the first ED study to disentangle cocaine and marijuana use in relation to NPV, as opposed to being combined into one "illicit drug" category, as well as to show an association of NPV (in both victimization and aggression) and use of prescription drugs. Future studies evaluating any prescription drug use the role of prescription drug misuse (and specifically opiate dependence), and the relationship of prescription use to other illicit drugs and NPV are needed to further evaluate this association.

The regression analysis shows that, accounting for other variables in the model, there is a pattern of increasing association of violence from any prescription drug use, to alcohol only, to marijuana, to cocaine users. The association of cocaine use in particular to both NPV aggression and victimization is highlighted in this data. Although this relationship may not be surprising, it highlights the need to address drug use in general, and cocaine use specifically among patients presenting with violence.

Finally, patients reporting NPV in this sample also report poor mental health, which was a strong marker of NPV, even when other demographic and substance use variables were considered. Studies of participants with substance use disorders found that for both men and women, psychiatric distress was associated with aggression and victimization with both partners and non-partners, although findings are stronger for women than men.[16, 28, 31, 79–81]

In comparison to intimate partner violence, recent NPV (victimization and aggression) among adults has been relatively unaddressed among ED populations outside of those presenting for acute assault-related injury. However, NPV has been studied in other health care settings such as primary care[82] and walk-in clinics[69] found rates of NPV victimization to be high (45%of young adult males and 48% overall respectively). One prior retrospective ED study of female-to-female violence amongst women[83] found that approximately 9% of women presenting to the ED for any reason had been victimized, and of these women, only 5% identified their assailant as being an intimate partner. This study finds also that a surprisingly high number of women seeking ED care have recently been involved in NPV.

Identifying and intervening with patients who have experienced recent NPV and are therefore at increased risk of future violence and injury has significant public health implications. Although there is a paucity of data on effective treatment interventions targeting violence in ED samples, there is evidence to support that addressing substance use is related to reductions in violence, even if the reported substance use and violence were not temporally related initially. For example, studies have found that patients who decrease their substance use (following treatment engagement) experience substantial reductions in violence over time.[28, 48, 84, 85] Interventions based on cognitive and behavioral strategies can impact both substance use and violence.[86–89] Therefore identifying individuals who report recent substance use and recent violence in the ED may offer an opportunity for intervention.

EDs often serve primary care functions; in this capacity, the ED may be a setting for interventions to interrupt the cycle of violence among patients treated routinely for fistfights, bar fights, and neighborhood disagreements. ED-based substance use interventions may be

beneficial in preventing future injury,[90] and other more intensive case management interventions have been shown to decrease criminal justice outcomes and violence involvement among admitted trauma inpatients.[91] Findings from the regression analysis highlight the impact of substance use beyond that of traditional demographic risk factors (age, gender, employment status). Future studies are needed to evaluate the impact of substance use treatment on patient experiences with violence and associated injury mortality and morbidity.

In Retrospect

Although this study identifies broad domains of possible prevention strategies, data that elucidates treatment readiness should be assessed in future studies. In addition, future studies should evaluate the characteristics and type of injury and injury severity in relation to NPV.

Conclusions

Findings from this large, consecutive cohort of ED patients over 2 full calendar years demonstrates that a substantial number patients (14%) seeking care in an inner-city ED experience violence with a non-partner. Associated risk factors did not differ by victimization or aggression, and cocaine use was the strongest predictor of NPV.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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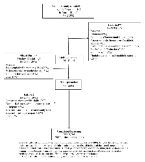

Figure 1. Recruitment Flow

Many patients had multiple ED visits and were screened more then once (~1400). Only the first screen was used in data analysis. Multiple visits by individual patients are not reflected in the N of the overall sample frame.

*Does not include patients treated at study ED on days not covered by research recruiting staff , or those not in a treatment room between 9 am and 11pm.(i.e. major holidays, RA vacation days, RA sick days. Missed or partially covered shifts account for ~ N= 11,416 patients over 2 year time frame)

** Excluded: Tallied for 12 months of study and doubled to estimate second year.

Table 1

Past Year Non-Partner Violence

	Female N=6027 (%)	Male N=4717 (%)	Total N=10,744(%)
Victimization			
"Have you been hit, kicked, punched, or otherwise hurt"	422 (7)	738 (16)	1160 (11)
Aggression			
"Have you hit, kicked, punched, or otherwise hurt"	324 (5)	609 (13)	933 (9)
Any Non-Partner Violence	557(9)	918 19)	1475 (14)

Non-Partner Violence is defined as violence among friends, strangers, neighbors, people in bars, co-workers etc; does not include violence against a partner or spouse. Percentages used in the table are column percentages.

Table 2

Bivariate Comparisons of Any Non-Partner Violence Based on Demographics, Health Status, and Substance Use (N=10,744).

Variables	Any Non-Partner Violence (n=1475)		No Violence (n=9269)	
Demographics	**Mean**	**(±}SD)**	**Mean**	**(±}SD)**
Age	31.53	(10.5)	37.11	(11.5)
	n	**(%)**	**n**	**(%)**
Male	918	(62.2)	3799	(41.0)
African American[a]	734	(49.8)	5237	(56.5)
Married or Living Together	337	(22.9)	3109	(33.5)
Some College or College Grad	469	(31.8)	3495	(37.7)
Health Insurance (yes)[a]	1029	(69.9)	7286	(78.7)
Annual Income < $20,000[a]	803	(74.4)	4090	(64.2)
Employed[a]	630	(42.8)	4348	(46.9)
Reason for Current ED Visit				
Injury	622	(42.2)	2314	(25.0)
SF-12 Health Status				
Physical Health (≤ 25th Percentile)	352	(23.9)	2334	(25.2)
Mental Health (≤ 25th Percentile)	518	(35.1)	2168	(23.4)
Substance Use in the Past 30 Days[*]				
Alcohol Only	472	(32.0)	2732	(29.5)
Marijuana (+/− alcohol)	473	(32.1)	1510	(16.3)
Cocaine (+/− alcohol or marijuana)	126	(8.5)	325	(3.5)
Other illicit drugs [*]	32	(2.2)	49	(0.5)
Prescription drug use[**]	299	(20.3)	1252	(13.5)
Substance Abuse and/or Dependence				
Alcohol	514	(34.9)	845	(9.1)
Cocaine	137	(9.3)	280	(3.0)
Marijuana	200	(13.6)	412	(4.4)
Substance Use Treatment				
In Past 3 Months	129	(8.8)	321	(3.5)

Percentages used in the table are column percentages

[a] Some subjects did not respond or skipped this question

[*] Reference category = 'No Substance Use'

[*] Other illicit drugs (ie club drugs, inhalants, methamphetamine, heroin or hallucinogens)

** Prescription drug use:*opiates* ie morphine, codeine, vicodin, Darvon, OxyContin, Darvocet, Percodan, Fentanyl, *Sedative Depressants* ie Xanax, Librium, Valium, Quaaludes, Halcion, sleeping pills, nerve pills downers barbiturates etc)

Table 3

Logistic Regression Analysis Predicting Any Non-Partner Violence.

	Any Non-Partner Violence*		
	OR	**95% CI**	
Demographics			
Age	0.95	0.95	0.96
Male	2.20	1.94	2.50
African American	0.80	0.71	0.91
Married or Living Together	0.64	0.55	0.73
Some College or College Grad	1.07	0.94	1.22
Health Insurance (yes)	0.97	0.84	1.11
Employed	0.84	0.74	0.95
Chief Complaint			
Injury	1.94	1.71	2.19
Mental Health			
Physical Health (≤ 25th Percentile)	1.32	1.14	1.54
Mental Health (≤ 25th Percentile)	1.90	1.67	2.17
Substance Use in the Past 30 Days			
Alcohol Only **	1.73	1.49	2.01
Marijuana (+/− alcohol) **	2.36	2.02	2.76
Cocaine (+/− alcohol or marijuana) **	3.10	2.41	3.98
Prescription drug use	1.43	1.22	1.68
Substance Use Treatment			
In Past 3 Months	1.70	1.34	2.15

Age is a continuous variable

* Reference category = No Non- Partner Violence

** Reference category = No Substance Use

Prescription drug use:*opiates* morphine, codeine, vicodin, Demerol, Darvon, OxyContin, Darvocet, Tylenol 2,3,4, Stadol, Percodan, Fentanyl,*Sedative Depressants*, , Xanax, Librium, Valium, Quaaludes, Halcion, sleeping pills, nerve pills downers barbiturates etc)

Model = (χ^2 (15) = 1143.82, $p < .0001$).