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Violent Crime in the Lives of Homeless, Female Ex-Offenders

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Abstract

The cyclical pattern of violence in the lives of homeless female ex-offenders may precipitate ongoing substance use and recidivism – all of which have shown to be mounting public health issues affecting successful reentry. This paper which analyzed baseline data from a longitudinal study of 126 female ex-offenders in Los Angeles and Pomona, California, highlighted the factors found to be associated with violent crime among homeless female ex-offenders. A multiple logistic regression model for whether or not the last conviction was for a violent offense indicated that poor housing (p=.011) and self-reported anger or hostility (p<.001) were significant correlates. An ordinal regression model for the number of violent offenses also indicated that affectionate support was associated with committing fewer number of violent crimes (p=.001), while positive social interactions (p=.007), and anger/hostility (p=.015) were associated with greater number of violent crimes. Implications for developing a comprehensive array of strategies

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that can mitigate the pattern of violence often seen in the lives of homeless female who have recently exited jails and prisons is discussed.

Keywords

violent crime; female; ex-offenders; homelessness

Over the last decade, a sharp rise in female incarceration has made women the fastest growing population in United States' (US) prisons and jails (Salem, Nyamathi, Idemundia, Slaughter, & Ames, 2013). In 2014, the population of incarcerated women increased at a greater percentage than did the male population, both nationally and in the State of California (Carson, 2015). Among women released from California prisons and jails, successful community reentry remains a challenge, as nearly 50% of female ex-offenders recidivate within three years (California Department of Corrections and Rehabilitation, 2014). The interrelationship between incarceration and homelessness becomes a reality for many women; in particular, in urban cities including San Francisco and Los Angeles, between one third to half of all released adult offenders are homeless (California State Department of Corrections Publications Coordinator, 1997).

Women exiting the criminal justice system are at increased risk for new or continued homelessness as a result of substance use relapse, lack of employment, and for many, the stigma of having been incarcerated (Batchelor, 2005; Schram, Koons-Witt, Williams, & McShane, 2006; van Olphen, Eliason, Freudenberg, & Barnes, 2009). Poverty, mental illness, lack of social support and having experienced physical, emotional, and/or sexual abuse (Batchelor, 2005) have also been shown to increase women's risk for becoming homeless (Batchelor, 2005; Metraux, Caterina, & Cho, 2008; Parhar & Wormith, 2013; Schram et al., 2006) and contribute to the cyclical pattern of violent crime.

Violent crime is defined by the Federal Bureau of Investigation (FBI) as murder and non-negligent manslaughter, rape, robbery, and aggravated assault (U.S. Department of Justice, 2014). In 2014, 26.7 percent of all arrestees were women and accounted for 20.2 percent of violent crime of all persons arrested in 2014 (U.S. Department of Justice, 2014). Approximately 25 percent arrested for driving under the influence, 43.2 percent were arrested for larceny-theft, and 20.4 percent were arrested for drunkenness and/or drug use (U.S. Department of Justice, 2014).

Homelessness and Low Socioeconomic Status as Risk Factors for Violent Crime

Many homeless female ex-offenders face a constellation of socioeconomic disadvantages, such as a lack of private space, isolation from positive social support networks, and financial stress, all of which may lead to violence (Swick, 2008). Further, socioeconomic disadvantage has been correlated with violent crime (Batchelor, 2005; Steffensmeier & Allan, 1996) among female ex-offenders; in fact, violent crime among this population may be a last resort in an attempt to garner basic necessities.

While the literature examining the role of socioeconomic disadvantages in violence committed by homeless women is scant, seminal work by Banks and Fairhead (1976) revealed that male and female ex-offenders released from prison with unstable living arrangements were three times more likely to commit another violent offense than those with stable living arrangements (Banks & Fairhead, 1976; National Health Care for the Homeless Council, 2013). Low socioeconomic status has also been positively correlated with homicide rates among male and female ex-offenders in cities (Fajnzylber, Lederman, & Loayza, 2002).

For many women during reentry, feeling discriminated against or stigmatized may negatively influence self-esteem (LeBel, 2012) and hinder reintegration (Chui & Cheng, 2013). In one study among formerly incarcerated persons (N=204), over half (65.3%) shared that they had been discriminated against because they were a former prisoner. Other reasons of discrimination included race/ethnicity (48.0%) and past drug and alcohol use (47.5%) (LeBel, 2012).

History of Trauma and Abuse

A history of abuse may play a role in the perpetuation of violence against others. Homeless women, in particular have significant histories of physical and sexual abuse (Batchelor, 2005; Hudson et al., 2010; Weir et al., 2009). In one study of women who committed violent acts, over half of the sample had experienced either sexual or physical abuse in childhood and/or adolescence (Wesely, 2006). Many of the violent crimes committed by female offenders were found to be against significant others who had at one point physically and/or sexually assaulted them (Covington, 2002). Strikingly, an estimated 75 to 95 percent of female inmates have been victims of intimate partner violence (IPV) (Zust, 2009).

Substance Use as a Predictor of Violent Crime

Substance abuse is the primary reason ex-offenders are re-incarcerated (Altice et al., 2005). In one study, an estimated 60 percent of women in state prisons and 43 percent of women in federal prisons met the criteria for substance abuse or dependence (Mumola & Karberg, 2007). Drug-dependence has been shown to produce deficits in anger regulation, as well as an increased susceptibility to aggression (Patrick, 2008). In particular, frequent crack and marijuana use has been associated with increased perpetration of IPV (El-Bassel, Gilbert, Wu, Go, & Hill, 2005).

For women, cocaine/crack (49%), amphetamines (41%), marijuana (40%), and opiates (21%) were among the most frequently used drugs prior to incarceration (Grella & Greenwell, 2007). In fact, in a cross-sectional study, women imprisoned for violent offenses were found to have more prominent, multi-substance abuse problems as compared with the general female prison population (Batchelor, 2005).

Mental Illness and Ineffective Coping

Although men are convicted of violent crimes much more frequently than women (Greenfeld & Snell, 1999), research has shown that gender disparity decreases with certain

mental illnesses, particularly DSM-IV Axis II disorders (de Vogel & de Ruiter, 2005). In one study of psychiatric inpatients with borderline, narcissistic, or antisocial personality disorders (ASPD), gender difference in the base rate of violence was negligible (de Vogel & de Ruiter, 2005). Another study found that women convicted of violent crimes displayed more self-injurious behaviors than the general female prison population (Batchelor, 2005).

Despite the fact that violent crime costs American taxpayers $42 billion in medical expenses, police involvement, courts, correctional institutions, and salary losses for both the perpetrator and the victim (Shapiro & Hassett, 2012), there still is a dearth of research addressing predictors of violent crime among female, homeless ex-offenders exiting prisons and jail.

The Comprehensive Health Seeking and Coping Paradigm (CHSCP) (Nyamathi, 1989) was the framework used to highlight life challenges parolees have faced as they prepare to reenter the community (Nyamathi et al., 2016; Nyamathi et al., 2015) These challenges often include overcoming threats to health, life crises, and to retain or attain optimal health. Types of variables which are thought to influence outcomes, which in this paper is recent incarceration for a violent crime. Variables include: sociodemographic (gender, race, age, and history of homelessness, abuse, and incarceration), situational variables, such as environmental constraints, and behavioral (coping, social support, mental health) factors.

This study aims to elucidate the factors that are associated with violent crime among homeless, female ex-offenders. Prison and jail exit programs have historically failed to consider gender-specific needs for female offenders (Garcia & Ritter, 2012), particularly those who are homeless, have a history of violent crime, and are being released into the communities.

We hypothesized that a recent arrest for violent crime would be associated with drug and alcohol use in the last six months, poor coping behaviors and social support, discriminatory beliefs about self, lack of housing safety, and poor physical and mental health. Thus, insight into the correlates of violent crime among homeless female ex-offenders may aid in the development of more gender-sensitive treatment approaches focused on reducing subsequent occurrence of violent crimes among this at-risk group.

METHODS

Design

A cross-sectional study of baseline data from a clinical trial of 126 homeless female ex-offenders (HFOs) randomized into one of two behavioral treatment programs were utilized to assess correlates of violent crime. The study was approved by the UCLA Institutional Research Board (IRB) Human Subjects Protection Committee.

Sample

The sample included 126 HFOs. Participants who were eligible for the study were: a) aged 18–65; b) homeless when released from prisons or jails within the last six months; and c) reported a history of engaging in drug or alcohol use. Potential participants were excluded if

they: a) spoke languages other than English or Spanish; or b) exhibited active psychotic symptoms. Data were collected from February 2015 to May 2016.

Site(s)

Participants were recruited from four community-partnered organizations in Los Angeles and Pomona, California. In the two residential drug treatment (RDT) programs, women received the RDT structured therapeutic community curriculum that was up to six months, 7-days per week and focused on reducing substance use and promoting community living. One site operated a RDT facility in South Los Angeles, while the other operated a small women's only RDT facility in Pomona, California. In each RDT site, 50% of women were enrolled from prisons and jails equally. The other two LA-based facilities were focused on addressing basic needs for homeless women and offered services that included meals, showers, social services and case management.

General Procedures

At the sites, HFOs were informed of the study by IRB-approved posted flyers. Weekly informational sessions about the study were delivered by the research staff; several of whom included women with a history of homelessness and/or incarceration. Staff were trained for several weeks and were highly skilled in interview skills and instrument administration on tablets. For residents who expressed interest in the study, the research staff provided detailed information about the study in a private location of each designated facility.

Among HFOs interested in participating, written informed consent was obtained for eligibility screening prior to the administration of a two-minute survey. Once determined eligible, the screening data were entered into the computer to assign randomization via our commonly utilized Urn Randomization (Stout, Wirtz, Carbonari, & Del Boca, 1994) program. Participants were randomized based upon age (*i.e. 18–40 versus 41–65*) and the Lifestyle Criminality (LCSF) score (*i.e. <10 versus ≥ 10*).

Following a second informed consent prior to enrollment in the study, the research staff administered a 45-minute baseline questionnaire via tablet computer. To reduce respondent fatigue, frequent short breaks were provided throughout the assessment process. Study data were collected and managed using Research Electronic Data Capture (REDCap) hosted at UCLA (Harris et al., 2009). REDCap is a secure web application for building and managing online surveys and databases which provides: a) an intuitive interface for validated data entry; b) audit trails for tracking data manipulation and export procedures; c) automated export procedures for seamless data downloads to common statistical packages; and d) procedures for importing data from external sources (Harris et al., 2009).

Cash incentives in the amount of $3 for the initial screening and $15 for the baseline survey were provided. In total, 176 HFOs were screened; 50 were ineligible based on screening criteria of age, history of drug use or time since paroled. The total sample size was 126. Baseline data were collected from February 2015 to May 2016.

Instruments

Sociodemographic questions elicited information on age, race/ethnicity, marital status, and living arrangement in the last six months prior to the most recent incarceration.

Discriminatory Beliefs

A 12-item Devaluation/Discrimination Beliefs Scale (DBS) using a 6-point Likert scale assessed response options ranging from (1) "strongly disagree" to (6) strongly agree" (with no fixed neutral point) (Link, Cullen, Struening, Shrout, & Dohrenwend, 1989; Winnick & Bodkin, 2008). A sample item included "Most people believe formerly incarcerated persons are just as trustworthy as the average person" and "Most people would not accept a person who has been to prison as a teacher in the public schools." An overall score was calculated (range 17–70), with the scaled items demonstrating high internal reliability (α=0.80).

Coping behaviors

The Emotional Regulation Modes of Coping Scale, a 20-item scale, assessed impulse control, lack of emotional awareness and limited access to emotion regulation strategies (Gratz & Roemer, 2004). A 5-point Likert scale ranged from "almost never" to "almost always." Sample items included "When I am upset, I become out of control," and "When I'm upset, I start to feel very bad about myself." Alpha coefficients for the subscales included impulse control difficulties (six items, α =0.82), lack of emotional awareness (six items, α = 0.77), and limited access to emotion regulation strategies (eight items, α = 0.84). Higher scores in each item indicated greater problems with emotion regulation and dysregulation.

Social Support

The Medical Outcomes Study (MOS) Social Support Survey (Sherbourne & Stewart, 1991), a 19-item scale which includes 4 subscales, assessed: a) emotional/informational support (eight items, α =0.95); b) tangible support (four items, α = 0.89); c) positive support (three items, α = 0.94); and d) affectionate support (three items, α = 0.93). Items had a 5-point Likert scale response options ranging from "none of the time" to "all of the time". Sample items included "Someone you can count on to listen to you when you need to talk" and "Someone who understands your problems." Final scores for each subscale were obtained by averaging the scores for each item in the subscale along with obtaining an overall support index score; higher scores indicated more support.).

Depressive Symptoms

A 10-item short form of the Center for Epidemiological Studies Depression (CES-D) scale (Andresen, Malmgren, Carter, & Patrick, 1994), previously used among homeless populations, (Nyamathi, Christiani, Nahid, Gregerson, & Leake, 2006) assessed depressive symptoms. A 4-point Likert scale ranges from "rarely or none of the time" to "most of the time". Sample items included "I was bothered by things that usually don't bother me" and "I felt depressed." Total scores of 10 indicate depressive symptomology, with the internal consistency reliability of this instrument being 0.83 in this study.

Women's Risk Needs Assessment

The Women's Risk Needs Assessment-Trailer Probation Interview (WRNA-TPI) (Wright, Van Voorhis, Bauman, & Salisbury, 2008) which has several subscales including: a) housing safety; b) anger/hostility; c) post-traumatic stress disorder (PTSD) screen; and, d) relationship difficulties, was used to assess the women's overall needs.

Housing Safety

A four-item subscale from the WRNA-TPI (Wright et al., 2008) assessed perceptions of violence and safety in the home environment. Sample items asked, "Is your current living environment free of violence" and "Is your current living environment free of substance abuse"? Responses included "yes" or "no." Cut-off of two or higher indicates higher risk and treatment needs which need to be matched to safe and affordable housing, restraining orders, and safety in relationships. The total housing safety score was calculated by adding all the four items (range 0–4) and has an internal consistency reliability of 0.70.

Anger or Hostility

Three items were used from the WRNA-TPI (Wright et al., 2008) which asked about anger, depression and other mental health issues that are common to many women. Sample items included "Would you describe yourself as having a strong temper?" or "Were you angry or upset when you committed the present offense?" Response options included "yes" or "no." The total score determined the level of risk/supervision (*i.e. low, medium, and high risk*). A higher score warrants cognitive-behavioral based anger management classes. The total anger hostility score was calculated by adding all the three items (range 0–3).

Post-Traumatic Stress Disorder (PTSD)

Four items from the WRNA-TPI (Wright et al., 2008), assessed experiences in the last month which were frightening, horrible, or upsetting. A sample item included is "Have had nightmares about it or thought about it when you did not want to." Response options included "yes" or "no." The total PTSD score was calculated by adding all the four items; a score of 3 may indicate a serious mental health problem. The instrument had an internal consistency reliability of 0.84.

Relationship Difficulties Scale

Six items from the WRNA-TPI (Wright et al., 2008) asked about most recent intimate relationship(s) whether they were supportive, satisfying, appreciated and if these relationships convinced to get involved in criminal behavior or caused trouble with the law. Sample items included "Have partner(s) been able to convince you to get involved in criminal behavior?" and "Have significant others loved and appreciated you for who you are?" The responses included "yes" or "no" for two items and a three-point response scale from "often," "sometimes," and "seldom/never" for the remaining four items. The total score was calculated by adding all six items; a cut-off of eight or higher indicated greater relationship dysfunction with a Cronbach's alpha of 0.72.

Illicit drug use

The Texas Christian University (TCU) Drug History Form (Institute of Behavioral Research, 2007) assessed drug use (*e.g. marijuana, crack, methamphetamine, amphetamine, tranquilizers, opiates*) within the last 12 months prior to the last incarceration. Responses were coded as "yes" or "no."

Alcohol use

The TCU Drug History form measured alcohol used within the last 6 months prior to the last incarceration (Institute of Behavioral Research, 2007). A response to whether one consumed any alcohol use in the last 6 months was assessed as "yes" or "no."

General Health Status

One item from the RAND Medical Outcomes Study (MOS) 36-Item (SF-36) Health Survey measured – general quality-of-life (Ware & Sherbourne, 1992). Current general health was assessed by one item on a 5-point response scale from "excellent," "very good," "good," "fair" and "poor." Bodily pain was also assessed by one item on a Likert scale that ranged from "none" to "very severe".

Outcomes

Violent Crime—Two items from the LCSF (Walters, 1991); measured specifically, "Was the last conviction for a violent offense" and "How many prior violent offenses have you committed". Responses included "yes" or "no" for the first outcome and 1) none, 2) one or two or 3) three or more for the second outcome.

Data Analysis

SAS version 9.4 was used to analyze the data. Descriptive statistics (means and standard deviations for continuous variables and percentages for categorical variables) were used to describe sociodemographic and behavioral characteristics of the sample for homeless ex-offenders who were recently released. Comparisons between sociodemographic characteristics and violent crime outcomes were carried out using non-parametric tests such as Kruskall Wallis for continuous predictors and the Fisher exact for categorical predictors. In a two-step procedure, variables that were significant in the bivariate analyses at the .2 level were then included as potential predictors in the logistic and ordinal regression models. Controlling for site, any predictors that were not significant at the 0.1 level were sequentially removed from the model, starting with the largest, to create a final predictive model for each outcome.

Results

Sociodemographic Factors

As shown in table 1, the average age was 39.15 (SD 11.4) and the sample included 42.1% African-American women, along with 18.3% White, and 39.7% Latino. Over one third (39.7%) of the women were married and over half of the participants (52.4%) reported at least 10 to 12 years of education.

Criminal and Violence History—About one third (33.3%) reported their last conviction was for a violent offense. Moreover, nearly half (47.6%) reported prior violent offenses, and nearly 12% reported three or more violent offenses. Not surprisingly, the majority (86.4%) of the women witnessed violence; in fact, on average women first witnessed violence at 10 years of age (SD = 6.77). About one in three (30.2%) reported abusing a family member or significant other. Slightly less than a quarter (22.2%) reported being arrested by 14 years of age. Nearly three quarters (73.8%) were arrested five or more times, while almost one in five (19.8%) reported being arrested a total of two to four times.

Housing Safety and Health Risk Assessment—Perception of acceptable housing safety (μ= 1.04, SD 1.20, range 0–4) was found, and on average, scored under the cut off (2). Over three quarters of the women perceived their current living area to be free of violence as well as free of substance use.

In terms of physical health, over half (61.9%) of the population reported that health ranged from either "good" to "excellent." However, over one third (34.8%) reported moderate-to-very severe body pain.

Alcohol and Drug Use and Risk Assessment—Almost half (42%) of the sample reporting drinking alcohol in the last six months. Among participating reporting marijuana and crack use during the previous six months, over half (53%) reported using marijuana and crack (51.9%) on a daily basis. However, among participants reporting methamphetamine use during the past six months, nearly three quarters (73.7%) reported using methamphetamine almost every day (Table 2) during this time.

Emotional and Environmental Health—Impulse control difficulties (μ=13.71, SD 5.51, range 6–30), lack of emotional awareness (μ=13.71, SD 5.28, range 5–27), and limited use of emotional regulation strategies (μ=17.21, SD 6.74, range 8–40), revealed moderately high scores. Similarly, social support, in terms of emotional/informational, tangible, affectionate and positive social interaction were each in the mid range of their scores, respectively. Beliefs of being discriminated against due to their incarceration history revealed mean scores that were close to mid-range (μ= 46.03, SD 11.07). Scores on the depressed mood scale were high (μ = 9.69, SD 6.38) given those with a total score of 10 meet the criteria for depressive symptoms. However, while the mean PTSD screen score was moderate (μ=1.62, SD 1.62, range 0–4), anger/hostility scores were low (μ = 1.43, SD 1.13, range 0–3). Further, relationship difficulties were reported to be moderate (μ=4.91, SD 3.24, range 0–12).

Bivariate Associations between Risk Factors and Measures of Violent Crime

A number of baseline variables were found to be related to both one's last conviction being for a violent offense and to having a number of prior violent offenses (Table 3). Violent offenders were less likely to report having affectionate support (p=0.013), and more likely to report having experienced anger/hostility (p=0.002). Older age was associated with having none or 3 prior violent offenses (p=.039). Housing safety was significantly related to having less number of prior violent offenses (p=028). This was likewise found true for

positive social interaction (p = .045). Alternatively, anger/hostility (p=.042) was related to having greater number of prior violent offenses. The average positive social interaction is higher for those with 1–2 prior violent offenses, compared to those with none or greater than 3 prior violent offenses. Further, experiencing anger/hostility was more likely with three or more prior violent offenses as compared with none or fewer.

Multivariate Findings of Violent Crime

A multiple logistic regression model showed that the likelihood that an HFO's last conviction was for a violent offense was significantly associated with total housing safety scores (OR=.60, p=.011) and anger or hostility (OR=1.93, p<.001). In particular, with a one-unit increase in the total housing safety score, we expect to see about a 40% decrease in the odds that the last conviction was for a violent offense. Similarly, a one-unit increase in anger/hostility score was associated with a nearly two-fold increase in the odds of having committed a violent last offense.

An ordered logistic regression model was fit for the number of prior violent offenses which has categories 'none', '1–2' and ' 3' and is treated as ordinal under the assumption that the levels of the variable have a natural ordering (none to 3). The model showed that the number of prior violent offenses was significantly associated with living with less affectionate support (OR=.41, p=.001), positive social interactions (OR=2.23, p=.007), and anger/hostility (OR=1.51, p=.015) after controlling for site.

In particular, for a one-unit increase in affectionate support, the odds of having 3 violent offenses is .41 times the odds of the combined categories '1–2' and 'none'. Likewise, for a one-unit increase in affectionate support, the odds of the combined categories of 3 and '1–2' are .41 times the odds of reporting 'none'. Similarly, for a one-unit increase in positive social interaction, the odds of having 3 violent offenses are 2.23 times the odds of the combined categories '1–2' and 'none'. Likewise, for a one-unit increase positive social interaction, the odds of the combined categories of 3 and '1–2' are 2.23 times the odds of reporting 'none'. Anger or hostility can be similarly interpreted with the odds of having 3 violent offenses are 1.51 times the odds of the combined categories '1–2' and 'none'.

Discussion

Violent crime in the lives of homeless, female, ex-offenders is a critical public health issue affecting successful reentry and continued recidivism. The purpose of this study was to understand the factors that are associated with violent crime among homeless, female ex-offenders to develop gender-responsive programming during reentry. Our hypotheses and the CHSCP guiding framework were, in part, supported in that we found violent offenses being associated with situational and behavioral factors, namely, a lack of housing safety, anger/hostility, and poor social support. Previous research among ex-offenders has found that there may be significant impediments to securing stable housing (Pogorzelski, Wolff, Pan, & Blitz, 2005; Roman & Travis, 2004); in fact, oftentimes the only available and affordable housing is in poverty-stricken, disadvantaged neighborhoods (Clark, 2015), wherein violence and drug use is commonplace in the fabric of the built environment. Violent crime however, was not associated with discriminatory beliefs or drug or alcohol use.

Each prisoner facing discharge asks a similar question, "Where will I sleep tonight?" (Roman & Travis, 2004). Likewise, ex-offenders may be ineligible for public housing if they have a history or violence, drug-related convictions or any crime if it is a safety risk (Pogorzelski et al., 2005). Without doubt, leaving a criminal justice institution is a social integration challenge (Western, Braga, Davis, & Sirois, 2015) filled with triggers for relapse and crime.

During reentry, it is critical, particularly for women, to provide housing which is devoid of violence, substance use and instability for those who are in recovery. However, this cannot be accomplished in a vacuum because of the macro-level systems influence on individuals. Thus, the recommendation that programs foster the development of those preparing to re-enter communities to navigate at both the individual- and community-level is critical (Rogers, Ramaswamy, Cheng, Richter, & Kelly, 2012). A concerted effort between the local housing authority, policy makers, reentry providers and the criminal justice community is a clear and pressing need.

We also found that poor coping behaviors, in the form of outbursts of anger and hostility were positively associated with violent crime. While our study did not show an association between PTSD and violent crime, previous research among 218 crime victims found that post-traumatic anger directed at the self and the perpetrator was associated with PTSD symptoms (Orth & Maercker, 2009). Those who have or are experiencing a traumatic event may experience anger directed at the self or others which may perpetuate the cycle of violence; in fact, victims might become perpetrators of violent acts (Orth & Maercker, 2009). Given the high percentage of individuals who have or are experiencing traumatic events, it may be critical to focus on coping strategies for unresolved anger at the self and others. Further, in the future, it may be critical to further examine decisions to engage in criminal activity, illegitimate over legitimate pathways (DeHart, 2008), as it may be rife with victimization.

Positive social interaction was positively related to a greater number of prior violent offenses. It is important to note that not all relationships positively influence behavioral choices. While individuals may label social interaction as positive; it may lead to negative life choices and events. In particular, the perception of positive social interaction may encourage engagement in negative behavioral choices (*e.g. substance use, criminality*) which may lead to incarceration. This is particularly the case as many female ex-offenders may not have the opportunity to reunite with their family due to discordant and unsupportive relationships (Roman & Travis, 2004) resulting from burning filial and familial bridges based upon past decisions.

Type of support available may be an important characteristic in mitigating future anger and hostility and lends credence to the importance of providing coping resources. This is particularly evident given the predominant relationship which exists among homelessness, incarceration, substance use (Nyamathi et al., 2014) and now violence among homeless female, ex-offenders. On the other hand, those who had affectionate support were less likely to have a higher number of violent offenses. Without doubt, during reentry, it is critical to

help women identify the difference between positive and negative social support and help them map out their own particular pathways to incarceration.

It is interesting that neither discriminatory beliefs nor using alcohol, marijuana, crack and meth were associated with a last conviction for a violent offense or number of prior violent offenses in the bivariate analysis. While discriminatory beliefs could lead to more violent offenses due to low self-esteem or anger, this was not found to be significant in the bivariate analysis. We believe that the most likely explanation for this negative findings is the nature of the study population (recently incarcerated women). For example, in a community-based sample of women, discriminatory beliefs might increase the likelihood of violent crime and other crimes leading to incarceration. If that is the case, when we just look at women who are incarcerated, we may not be able to detect an effect of discriminatory beliefs and violent crime, since women incarcerated for non-violent crime would also have high levels of discriminatory beliefs. Both groups (violent and non-violent crime) presumably would have higher discriminatory beliefs than non-incarcerated women but, of course, that is not the subject of this paper.

This phenomenon is even more likely to be the case for drug use, given the high rates of drug-related incarceration in the US. The high proportion of women who are incarcerated due to drug-related, non-violent crime will make it difficult to detect a difference in drug use between women incarcerated for violent versus non-violent crimes. Future research should investigate if drugs were used at the time of the offense and if so, which specific types of drugs.

Likewise, it is important to investigate the nature of women's participation in the drug economy as it relates to drug sales versus drug use. It is plausible that women are selling drugs versus using them. It is important to also explore how the various dimensions of capital (*e.g. financial, human, social and personal*) are applied to women during reentry (Anderson, 2005). It would be interesting to qualitatively explore and compare extant research on drug dealing activities, roles, and positions previously assumed among women and utilize those talents and skill sets as part of lawful work activities. In addition, it is important to explore the root causes of these roles as unearthing the decision making may shed light on contributing factors to recidivism and opportunities for intervention.

Strengths and Limitations

This study covered a broad range of the female ex-offender population. The age range spanned from 19–64 years of age, which impacted the variety and number of life experiences. Specifically, given their age, older ex-offenders may have had more experiences because they have lived longer as compared with their younger counterparts. Further, the settings of this study represented four locations in California which reported similar numbers of individuals served, services offered and population demographics. Despite these strengths, the sample size is undoubtedly small, which limits the generalizability of these findings. Further, differences in findings based upon prison versus jails were not possible due to the small sample size and the disproportionate number of women exiting jail. In addition, the cross-sectional study design limits our ability to assess the temporal

relationship between violent crime and the independent variables. Cohort studies are needed to determine whether our findings represent causal relationships.

Conclusion

RDT facilities are a safe haven for women reintegrating back into the community as they provide a window of opportunity during a vulnerable transition between institutions (*e.g. prison or jail*) and the community. Due to the wide-ranging challenges of reintegration (Shinkfield & Graffam, 2009), it is critical to develop a comprehensive array of strategies that can mitigate the pattern of violence often seen in the lives of homeless female ex-offenders. These factors include providing safe housing in an environment free from past negative support associations, drug use and crime, along with critical coping resources such as anger management and social support. While there are complex and interconnected dimensions affecting the successful reentry process of female ex-offenders, it is plausible that instituting these strategies will aid in successful and sustained reentry into communities.

Acknowledgments

References

Altice FL, Marinovich A, Khoshnood K, Blankenship KM, Springer SA, Selwyn PA. Correlates of HIV infection among incarcerated women: implications for improving detection of HIV infection. Journal of Urban Health. 2005; 82(2):312–326. DOI: 10.1093/jurban/jti055 [PubMed: 15872190]

Anderson TL. Dimensions of women's power in illicit drug economy. Theoretical Criminology. 2005; 94(4):371–400.

Andresen EM, Malmgren JA, Carter WB, Patrick DL. Screening for depression in well older adults: evaluation of a short form of the CES-D (Center for Epidemiologic Studies Depression Scale). American Journal of Preventive Medicine. 1994; 10(2):77–84. [PubMed: 8037935]

Banks C, Fairhead S. The petty short-term prisoner: Chichester : Rose [for] the Howard League for Penal Reform. 1976

Batchelor S. 'Prove me the bam!': Victimization and agency in the lives of young women who commit violent offences. Probation Journal. 2005; 52(4):358–375.

California Department of Corrections and Rehabilitation. 2013 Outcome Evaluation Report. Sacramento, CA: 2014. Retrieved from http://www.cdcr.ca.gov/Adult_Research_Branch/ Research_documents/Outcome_evaluation_Report_2013.pdf

California State Department of Corrections Publications Coordinator. Preventing Parolee Failure Program: An Evaluation. Rockville, MD: National Criminal Justice Reference Service; 1997.

Carson, AE. Prisoners in 2014. McConnell, L., Thomas, J., editors. Washington, D.C.: U.S. Department of Justice; 2015. p. 1-32.

Chui WH, Cheng KKY. The mark of an ex-prisoner: Perceived discrimination and self-stigma of young men after prison in Hong Kong. Deviant Behavior. 2013; 34(8):671–684. DOI: 10.1080/01639625.2013.766532

Clark VA. The Effect of Community Context and Post-Release Housing Placements on Recidivism: Evidence from Minnesota. Minnesota. 2015

Covington S. A woman's journey home: Challenges for female offenders and their children. Paper presented at the From Prison to Home Conference. 2002

de Vogel V, de Ruiter C. The HCR-20 in personality disordered female offenders: A comparison with a matched sample of males. Clinical Psychology & Psychotherapy. 2005; 12(3):226–240.

DeHart DD. Pathways to prison: Impact of victimization in the lives of incarcerated women. Violence Against Women. 2008; 14

El-Bassel N, Gilbert L, Wu E, Go H, Hill J. Relationship between drug abuse and intimate partner violence: a longitudinal study among women receiving methadone. American Journal of Public Health. 2005; 95(3):465–470. DOI: 10.2105/ajph.2003.023200 [PubMed: 15727978]

Fajnzylber P, Lederman D, Loayza N. Inequality and violent crime. Journal of Law & Economics. 2002; 45:1–40.

Garcia, M., Ritter, N. Improving access to services for female offenders returning to the community. National Institute of Justice; 2012. p. 18-23.

Gratz KL, Roemer L. Multidimensional assessment of emotional regulation and dysregulation: Development, factor structure, and initial validation of the difficulties in emotion regulation scale. Journal of Psychopathology & Behavioral Assessment. 2004; 26(1):41–54.

Greenfeld, L., Snell, T. Women Offenders. B. o. J. Statistics. , editor. 1999.

Grella CE, Greenwell L. Treatment needs and completion of community-based aftercare among substance-abusing women offenders. Womens Health Issues. 2007; 17(4):244–255. DOI: 10.1016/j.whi.2006.11.005 [PubMed: 17544296]

Harris PA, Taylor R, Thielke R, Payne J, Gonzalez N, Conde JG. Research electronic data capture (REDCap)–a metadata-driven methodology and workflow process for providing translational research informatics support. Journal of Biomedical Information. 2009; 42(2):377–381. DOI: 10.1016/j.jbi.2008.08.010

Hudson AL, Nyamathi A, Greengold B, Slagle A, Koniak-Griffin D, Khalilifard F, Getzoff D. Health-seeking challenges among homeless youth. Nursing Research. 2010; 59(3):212–218. DOI: 10.1097/NNR.0b013e3181d1a8a9 [PubMed: 20404776]

Institute of Behavioral Research. TCU Drug Screen II. Fort Worth, Texas: Texas Christian University; 2007.

LeBel TP. If one doesn't get you another one will: Formerly incarcerated persons' perceptions of discrimination. The Prison Journal. 2012; 92(1):63–87. DOI: 10.1177/0032885511429243

Link BG, Cullen FT, Struening E, Shrout PE, Dohrenwend B. A modified labeling theory approach to mental illness. American Sociological Review. 1989; 54:400–423.

Metraux S, Caterina R, Cho R. Incarceration and homelessness. Paper presented at the National Symposium on Homelessness Research. 2008

Mumola, CJ., Karberg, JC. Drug use and dependence, state and federal prisoners, 2004. 2007. from http://purl.access.gpo.gov/GPO/LPS85621

National Health Care for the Homeless Council. Incarceration & Homelessness: A Revolving Door of Risk. In: Knopf-Amelung, S., editor. Focus: A Quarterly Research Review of the National HCH Council. Vol. 2. Nashville, TN: 2013.

Nyamathi A. Comprehensive health seeking and coping paradigm. Journal of Advanced Nursing. 1989; 14(4):281–290. [PubMed: 2661620]

Nyamathi A, Christiani A, Nahid P, Gregerson P, Leake B. A randomized controlled trial of two treatment programs for homeless adults with latent tuberculosis infection. International Journal of Tuberculosis & Lung Disease. 2006; 10(7):775–782. [PubMed: 16848340]

Nyamathi A, Salem B, Marshall L, Idemundia F, Mata R, Khalilifard F, Leake B. Substance use trends among younger vs. older homeless parolees. Journal of Addictive Diseases. 2014; 33(2):124–133. DOI: 10.1080/10550887.2014.909694 [PubMed: 24784498]

Nyamathi A, Salem BE, Farabee D, Hall E, Zhang S, Faucette M, Yadav K. Impact of an intervention for recently released homeless offenders on self-reported re-arrest at 6 and 12 months. Journal of Addictive Diseases. 2016; :1–12. DOI: 10.1080/10550887.2016.1147796

Nyamathi A, Salem BE, Zhang S, Farabee D, Hall B, Khalilifard F, Leake B. Nursing case management, peer coaching, and hepatitis A and B vaccine completion among homeless men recently released on parole: Randomized clinical trial. Nursing Research. 2015; 64(3):177–189. DOI: 10.1097/nnr.0000000000000083 [PubMed: 25932697]

Orth U, Maercker A. Posttraumatic anger in crime victims: directed at the perpetrator and at the self. Journal of Trauma & Stress. 2009; 22(2):158–161. DOI: 10.1002/jts.20392

Parhar K, Wormith JS. Risk factors for homelessness among recently released offenders. Journal of Forensic Social Work. 2013; 3(1):16–33.

Patrick CJ. Psychophysiological correlates of aggression and violence: an integrative review. Philosophical Transactions of the Royal Society of London B Biological Sciences. 2008; 363(1503):2543–2555. DOI: 10.1098/rstb.2008.0028 [PubMed: 18434285]

Pogorzelski W, Wolff N, Pan KY, Blitz CL. Behavioral health problems, ex-offender reentry policies, and the "Second Chance Act". American Journal of Public Health. 2005; 95(10):1718–1724. DOI: 10.2105/ajph.2005.065805 [PubMed: 16131635]

Rogers JD, Ramaswamy M, Cheng CI, Richter K, Kelly PJ. Perceptions of neighborhood social environment and drug dependence among incarcerated women and men: A cross-sectional analysis. Substance Abuse & Treatment Prevention Policy. 2012; 7:39.doi: 10.1186/1747-597x-7-39

Roman, C., Travis, J. Taking Stock: Housing, Homelessness, and Prisoner Reentry. The Fannie Mae Foundation; 2004. p. 126

Salem BE, Nyamathi A, Idemundia F, Slaughter R, Ames M. At a crossroads: Reentry challenges and healthcare needs among homeless female ex-offenders. Journal of Forensic Nursing. 2013; 9(1): 14–22. DOI: 10.1097/JFN.0b013e31827a1e9d [PubMed: 24078800]

Schram PJ, Koons-Witt BA, Williams FPI, McShane MD. Supervision strategies and approaches for female parolees: Examining the link between unmet needs and parolee outcome. Crime & Delinquency. 2006; 52(3):450–471.

Shapiro, RJ., Hassett, KA. The Economic Benefits of Reducing Violent Crime: A Case Study of 8 American Cities. Washington, D.C.: Center for American Progress; 2012.

Sherbourne CD, Stewart AL. The MOS social support survey. Social Science Medicine. 1991; 32(6): 705–714. [PubMed: 2035047]

Shinkfield AJ, Graffam J. Community reintegration of ex-prisoners: type and degree of change in variables influencing successful reintegration. International Journal of Offender Therapy & Comparative Criminology. 2009; 53(1):29–42. DOI: 10.1177/0306624x07309757 [PubMed: 18063748]

Steffensmeier D, Allan E. Gender and crime: Toward a gendered theory of female offending. Annual Review of Sociology. 1996; 22:459–487.

Stout RL, Wirtz PW, Carbonari JP, Del Boca FK. Ensuring balanced distribution of prognostic factors in treatment outcome research. Journal of Studies on Alcohol Suppl. 1994; 12:70–75.

Swick KJ. The dynamics of violence and homelessness among young families. Early Childhood Education Journal. 2008; 36(1):81–85.

U.S. Department of Justice. Violent Crime. Washington, D.C.: Federal Bureau of Investigation; 2014.

van Olphen J, Eliason MJ, Freudenberg N, Barnes M. Nowhere to go: how stigma limits the options of female drug users after release from jail. Substance Abuse Treatment & Prevention Policy. 2009; 4:10.doi: 10.1186/1747-597X-4-10

Walters GD. Predicting the Disciplinary Adjustment of Maximum and Minimum-Security Prison Inmates Using the Lifestyle Criminality Screening Form. International Journal of Offender Therapy and Comparative Criminology. 1991; 35:63–71.

Ware JE Jr, Sherbourne CD. The MOS 36-item short-form health survey (SF-36). I. Conceptual framework and item selection. Medical Care. 1992; 30(6):473–483. [PubMed: 1593914]

Weir BW, O'Brien K, Bard RS, Casciato CJ, Maher JE, Dent CW, Stark MJ. Reducing HIV and partner violence risk among women with criminal justice system involvement: A randomized controlled trial of two motivational interviewing-based interventions. AIDS & Behavior. 2009; 13(3):509–522. DOI: 10.1007/s10461-008-9422-0 [PubMed: 18636325]

Wesely JK. Considering the context of women's violence: Gender, lived experiences, and cumulative victimization. Feminist Criminology. 2006; 1(4):303–328.

Western B, Braga AA, Davis J, Sirois C. Stress and Hardship after Prison. American Journal of Socilogy. 2015; 120(5):1512–1547.

Winnick TA, Bodkin M. Anticipated stigma and stigma management among those to be labeled ex-con. Deviant Behavior. 2008; 29:295–333.

Wright, EM., Van Voorhis, P., Bauman, A., Salisbury, EJ. Gender-responsive risk/needs assessment: Final report prepared for the Minnesota Department of Corrections. Cincinnati, OH: University of Cincinnati; 2008.

Zust BL. Partner violence, depression, and recidivism: The case of incarcerated women and why we need programs designed for them. Issues in Mental Health Nursing. 2009; 30(4):246–251. DOI: 10.1080/01612840802701265 [PubMed: 19363729]

Table 1

Baseline Sample Characteristics (N =126)

Measure	Mean	SD (Range)
Age	39.15	11.40 (19–64)
Age first witnessed violence	10.07	6.77 (1–37)
Site	**N**	**%**
Amistad de Los Angeles	27	21.4
Other	99	78.6
Race/Ethnicity		
African-American	53	42.1
Latino	39	39.7
White	23	18.3
Relationship Status		
Married	50	39.7
Education		
10–12 years	66	52.39
Other	60	47.62
Last Conviction for violent offense, yes	42	33.3
Number of prior violent offenses		
Three or More	15	11.9
One or two	45	35.7
None	66	52.4

Measure	N	%
Personally witnessed violence, yes	108	86.4
Abused a family member or significant other, *yes*	38	30.2
Age at first arrest		
<14 years	28	22.2
14 < age <19	39	31
19+	59	46.8
Number of times arrested		
Five or more	93	73.8
Two to four	25	19.8
One or none	8	6.3
Housing Safety		
Current living area free of violence, yes	95	75.4
Current living area free of substance use, yes	96	76.2
Health Status		
Excellent/Very Good/Good	78	61.9
Fair	38	30.2
Poor	10	7.9
Bodily Pain		
None/Very mild/Mild	82	65.1

Measure	N	%
Moderate	27	21.4
Severe/very severe	17	13.4

Table 2

Baseline Behavioral Characteristics (N = 126)

Measure	N	%
Ever used Alcohol, *yes*	113	89.7
Use alcohol last six months, *yes*	52	46.0
About every day	22	42.3
Only a few times	21	40.4
1–3 times a month	5	9.6
1–5 times a week	4	7.7
Ever Used Marijuana, *yes*	106	84.1
Use marijuana last six months, *yes*	44	41.5
About every day	23	53.5
Only a few times	8	18.6
1–3 times a month	7	16.3
1–5 times a week	5	11.6
Ever used crack/freebase, *yes*	66	52.4
Use crack/freebase last six months, *yes*	27	40.9
About every day	14	51.9
Only a few times	6	22.2
1–3 times a month	1	3.7
1–5 times a week	6	22.2
Ever used methamphetamine, *yes*	81	64.3
Use meth last six months, *yes*	38	46.9
About every day	28	73.7
Only a few times	4	10.5
1–3 times a month	2	5.3
1–5 times a week	4	10.5

	Mean	SD (Range)
Coping Behaviors		
Impulse Control Difficulties	13.71	5.51 (6–30)
Lack of Emotional Awareness	13.71	5.28 (5–27)
Limited Emotion Regulation Strat.	17.21	6.74 (8–40)
Social Support		
Emotional/Informational Support	3.40	1.13 (1–5)
Tangible Support	3.42	1.21 (1–5)
Affectionate Support	3.51	1.36 (1–5)
Positive Social Interaction	3.47	1.22 (1–5)
Discriminatory Beliefs	46.03	11.07 (17–70)
Depressed Mood(CES)	9.69	6.38 (0–28)
Post-Traumatic Stress Disorder (PTSD)	1.62	1.62 (0–4)
Total Housing Safety score	1.04	1.20 (0–4)
Anger/Hostility	1.43	1.13 (0–3)

Measure	N	%
Relationship Difficulties Scale	4.91	3.24(0–12)

Table 3

Bivariate Analyses between Risk Factors and Measures of Violent Crime (N=126)

Measures	Last conviction was for a violent offense			Number of prior violent offenses			
	No	Yes	p-value	None	1–2	3	p-value
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	Mean (SD)	
Age	40.3 (11.6)	36.9 (10.7)	0.241[+]	39.6 (12.7)	38.5 (10.1)	39 (9.2)	0.039[+]
Discriminatory beliefs	46.9 (11.0)	44.3 (11.2)	0.593[+]	47.5 (11.2)	45.0 (10.2)	42.7 (12.6)	0.874[+]
Coping Behaviors							
Impulse control	13.1 (5.2)	14.9 (5.9)	0.832[+]	13.5 (5.1)	13.3 (6)	16 (5.4)	0.068[+]
Emotional awareness	13.5 (5.5)	14.2 (4.8)	0.165[+]	13.6 (5.4)	14 (4.8)	13.5 (6.4)	0.422[+]
Emotion regulation	16.1 (5.9)	19.4 (7.8)	0.355[+]	17 (6.5)	17.2 (7)	18.5 (7.2)	0.297[+]
Social Support							
Emotional	3.4 (1.1)	3.3 (1.2)	0.181[+]	3.4 (1)	3.5 (1.2)	3 (1.3)	0.178[+]
Tangible	3.4 (1.2)	3.4 (1.3)	0.443[+]	3.3 (1.2)	3.7 (1.3)	3.2 (1.3)	0.594[+]
Affectionate	3.6 (1.3)	3.3 (1.5)	0.013[+]	3.7 (1.2)	3.6 (1.4)	2.7 (1.5)	0.053[+]
Positive Social Interaction	3.5 (1.1)	3.4 (1.4)	0.146[+]	3.4 (1)	3.7 (1.4)	3.1 (1.4)	0.045[+]
Depressed Mood	9.1 (6.6)	10.9 (5.7)	0.381[+]	9.5 (6.5)	9.2 (6)	11.9 (7)	0.623[+]
Women's Risk Needs Assessment (WRNA)							
Anger/hostility	1.2 (1.1)	1.9 (1.1)	0.002[+]	1.2 (1.1)	1.7 (1.1)	1.9 (1.2)	0.042[+]
PTSD	1.5 (1.6)	1.8 (1.6)	0.652[+]	1.6 (1.6)	1.7 (1.6)	1.7 (1.7)	0.136[+]
Relationship scale	5 (3.3)	4.8 (3.2)	0.712[+]	4.8 (3.2)	5.1 (3)	4.9 (4.3)	0.092[+]
Housing Safety							
Total housing score	1.2 (1.3)	0.7 (0.9)	0.098[+]	1.2 (1.2)	0.9 (1.2)	0.7 (1.2)	0.028[+]
	N (%)	N (%)		N (%)	N (%)	N (%)	
Free of violence, *yes*	61 (72.6)	34 (81)	0.383	47 (71.2)	36 (80)	12 (80)	0.562
Free of substance use, *yes*	62 (73.8)	34 (81)	0.506	52 (78.8)	32 (71.1)	12 (80)	0.638

Measures	Last conviction was for a violent offense			Number of prior violent offenses			
	No	Yes	p-value	None	1-2	3	p-value
	Mean (SD)	Mean (SD)		Mean (SD)	Mean (SD)	Mean (SD)	
	N (%)	N (%)		N (%)	N (%)	N (%)	
Site			0.065				0.0003
Amistad de Los Angeles	14(16.7)	13(31)		5(7.6)	16(35.6)	6(40)	
Other	70(83.3)	29(69)		61(92.4)	29(64.4)	9(60)	
Race			1				0.623
African-American/Black	36 (42.9)	17 (40.5)		26 (39.4)	21 (46.7)	6 (40.0)	
White/Anglo/Caucasian	15 (17.9)	8 (19.1)		12 (18.2)	8 (17.8)	3 (20.0)	
More than one race	7 (8.3)	4 (9.5)		5 (7.6)	6 (13.3)	0 (0)	
Other	26 (31.0)	13 (31.0)		23 (34.9)	10 (22.2)	6 (40.0)	
Hispanic	33 (39.3)	17 (40.5)	1	26 (39.4)	17 (37.8)	7 (46.7)	0.842
Lived with partner/spouse, *yes*	37 (44.1)	13 (31.0)	0.18	30 (45.5)	17 (37.8)	3 (20.0)	0.18
Drug Use History							
Ever used alcohol	78 (92.9)	35 (83.3)	0.123	60 (90.9)	40 (88.9)	13 (86.7)	0.77
Ever used marijuana	73 (86.9)	33 (78.6)	0.301	57 (86.4)	38 (84.44)	11 (73.3)	0.393
Ever used crack	47 (56.0)	19 (45.2)	0.265	35 (53.0)	26 (57.8)	5 (33.3)	0.281
Ever used meth	55 (65.5)	26 (61.9)	0.698	43 (65.2)	27 (60.0)	11 (73.3)	0.673
Health Status			0.507				0.116
Good/Very Good/Excellent	53 (63.1)	25 (59.5)		44 (66.67)	23 (51.11)	11 (73.33)	
Fair	26 (31.0)	12 (28.6)		20 (30.3)	15 (33.33)	3 (20)	
Poor	5 (6.0)	5 (11.9)		2 (3.03)	7 (15.56)	1 (6.67)	
Bodily Pain			0.984				0.349
Mild/Very mild/None	54 (64.3)	28 (66.7)		46 (69.7)	27 (60)	9 (60)	
Moderate	18 (21.4)	9 (21.4)		9 (13.64)	14 (31.11)	4 (26.67)	
Severe	8 (9.5)	3 (7.1)		7 (10.61)	3 (6.67)	1 (6.67)	
Very Severe	4 (4.8)	2 (4.8)		4 (6.06)	1 (2.22)	1 (6.67)	

Note:

[+]Kruskall Wallis p-value for all continuous predictors; all other categorical predictors have p-values from fisher exact tests

Table 4

Correlates of Violent Crime- Used in Models Predicting Measures of Violent Crime[1,2]

Measures	Last conviction was for a violent offense[4]			Number of prior violent offenses[5]		
	Odds Ratio[3]	95% CI	p-value	Odds Ratio	95% CI	p-value
Site	2.21	[.86, 5.67]	.10	4.78	[2,11.45]	<0.001
Social Support						
Affectionate Support				.41	[.24, .71]	0.001
Positive Social Interaction				2.23	[1.24, 4]	0.007
Total housing safety score	.60	[.41, .89]	0.011			
Anger/hostility	1.93	[1.32, 2.83]	<0.001	1.51	[1.09, 2.11]	0.015

[1] Odds ratio and p-value shown only for variables in final parsimonious models. Predictors with p<.20 in bivariate relationships (Table 2) were included in first multivariable models; then predictors with p>.10 in multivariable models were dropped for parsimony and models re-estimated with results shown here.

[2] Intercept estimates (and std. error) for "last conviction was for violent offense," −1.03 (.41), p=.013; for "number of prior violent offenses," −3.04(0.68), p=<.001 and −.69 (0.61), p=.258.

[3] OR=odds ratio

[4] Multiple Logistic Regression

[5] Ordinal Regression