Life History Models of Female Offending: The Roles of Serious Mental Illness and Trauma in Women's Pathways to Jail

Article *in* Psychology of Women Quarterly · August 2013

DOI: 10.1177/0361684313494357

CITATIONS
117

READS
3,276

5 authors, including:

Dana D DeHart
University of South Carolina
83 PUBLICATIONS **1,675** CITATIONS

SEE PROFILE

Shannon M Lynch
Idaho State University
40 PUBLICATIONS **1,268** CITATIONS

SEE PROFILE

Joanne Belknap
University of Colorado Boulder
87 PUBLICATIONS **2,599** CITATIONS

SEE PROFILE

Priscilla Dass-Brailsford
Georgetown University
24 PUBLICATIONS **786** CITATIONS

SEE PROFILE

Life History Models of Female Offending: The Roles of Serious Mental Illness and Trauma in Women's Pathways to Jail

Dana DeHart, Shannon Lynch, Joanne Belknap, Priscilla Dass-Brailsford and Bonnie Green

Psychology of Women Quarterly published online 2 August 2013
DOI: 10.1177/0361684313494357

Psychology of Women Quarterly
00(0) 1-14

DOI: 10.1177/0361684313494357
pwq.sagepub.com

Life History Models of Female Offending: The Roles of Serious Mental Illness and Trauma in Women's Pathways to Jail

Dana DeHart[1], Shannon Lynch[2], Joanne Belknap[3], Priscilla Dass-Brailsford[4], and Bonnie Green[4]

Abstract

Our mixed-methods study advances understanding of pathways to offending for jailed women with and without mental illness. Life history interviews with 115 women from five U.S. states examined how onset of crime and delinquency varied based on mental health status and trauma exposure. Women in jails had high rates of mental health disorders, with a majority meeting lifetime diagnostic criteria for a serious mental illness (50%), posttraumatic stress disorder (51%), and/or substance use disorder (85%). Cox regression analyses were utilized to examine associations between life experiences and risk of engaging in specific criminalized behaviors. Serious mental illness was associated with substance use, running away as a teen, and drug offending. Substance use disorder was related to earlier onset of substance use and driving under the influence. Intimate partner violence increased women's risks for property crimes, drug offending, and commercial sex work. Witnessing violence increased risks for property crimes, fighting, and use of weapons. Experiences of caregiver violence increased the risk of running away as a teen. Qualitative narratives were reviewed to provide insight into connections between women's experiences and onset of criminal behavior. Findings demonstrate a need for gender-responsive and trauma-informed practices to address mental disorders and victimization among women offenders.

Keywords

criminal behavior, mental health, life experiences, retrospective studies, trauma, victimization, incarceration

According to the U.S. Bureau of Justice Statistics (Minton, 2013), the number of persons confined in county and city jails increased after three consecutive years of decline in the United States. Women constituted approximately 13% of the 11.6 million persons admitted to local jails from June 2011 to June 2012. This report also revealed a 131% turnover rate among jail inmates; that is, the rate of inmates entering and exiting jails exceeds the average daily census at those facilities—a statistic that captures inmates' repetitive "cycling" in and out of jails. This high turnover may relate to mental health struggles faced by many jail inmates, particularly women (James & Glaze, 2006; Minton, 2013; South Carolina Department of Mental Health, 2006), with one contributing factor being the "criminalization" of mental illness (i.e., being arrested for public-order offenses associated with psychiatric illness; Liska, Markowitz, Whaley, & Bellair, 1999; Lurigio, 2012). Although research on the mental health needs of offenders is growing, many critical issues pertinent to screening and successful rehabilitation remain unanswered. The current study draws on theory on gendered pathways to offending (Salisbury & Van Voorhis, 2009) to examine the role of mental illness and trauma in female offending. Specifically, we examine how pathways to jail may differ for women with and without serious mental illness, with attention to the contributing role of trauma in childhood and adulthood.

In our study, we defined serious mental illness using criteria specified by Steadman, Osher, Robbins, Case, and Samuels (2009) to include major depressive disorder, bipolar disorders, and psychotic spectrum disorders. We focused on women because research indicates that pathways to crime may be "gendered" in that factors such as mental health and trauma may be particularly important to women's and girls' offending (Brennan, Breitenbach, Dieterich, Salisbury, & Van Voorhis, 2012; Salisbury & Van Voorhis, 2009). Specifically,

[1] College of Social Work, University of South Carolina, Columbia, SC, USA
[2] Department of Psychology, Idaho State University, Pocatello, ID, USA
[3] Problem Behavior Program, Institute of Behavioral Science, University of Colorado at Boulder, CO, USA
[4] Department of Psychiatry, Georgetown University Medical School, Washington, DC, USA

Corresponding Author:
Dana DeHart, College of Social Work, University of South Carolina, Columbia, SC 29208, USA.
Email: dana.dehart@sc.edu

we assessed the prevalence of mental disorders and the extent of traumatic experiences among women in jail, and we examined how mental health status and trauma exposure relate to the onset of different types of crime and delinquency. Our mixed-methods research design included collection of both quantitative and qualitative data using life history calendars. We used quantitative event-history analysis to longitudinally examine events (e.g., onset of offending) as the unit of analysis, rather than individuals or social groups. Women's qualitative narratives provided insight into how these events were situated within the broader context of women's lives. First, we review existing literature on trauma and mental health because these may relate to women's and girls' pathways to offending.

The Role of Trauma

Research on gendered pathways (Brennan et al., 2012) defines "gender neutral" risks that are associated with criminal offending for both males and females (e.g., antisocial peer networks, criminal thinking, stability of housing, and employment) as well as "gender responsive" risks that are particularly relevant to female offending (e.g., histories of victimization and adversity, relationship dysfunction, mental health problems). The role of victimization has been prominently featured in "pathways" theories of women's crime, possibly as a precursor to mental health struggles that may lead to substance use and offending (Salisbury &Van Voorhis, 2009). Prior studies demonstrate high rates of trauma exposure among women and girls in jails, prisons, and juvenile facilities as well as those on probation (Asberg & Renk, 2012; Belknap & Holsinger, 2006; Browne, Miller, & Maguin, 1999; DeHart, 2008; Gaarder & Belknap, 2002; Green, Miranda, Daroowalla, & Siddique, 2005; Lynch, Fritch, & Heath, 2012; McDaniels-Wilson & Belknap, 2008; Walsh, DiLillo, & Scalora, 2011). Jails are typically operated by local governments (e.g., counties) and hold persons awaiting trial or serving shorter sentences, whereas prisons are operated by state or federal governments and hold those convicted of crimes. Focusing on women in jails, Green, Miranda, Daroowalla, and Siddique (2005) interviewed 100 women inmates and found that an overwhelming majority (98%) reported trauma exposure, most commonly partner violence (71%) or childhood trauma (62%). Similarly, James (2004) noted that a majority of women jail inmates whom she interviewed reported having been abused (physical abuse 45%, sexual abuse 36%, and both physical and sexual abuse 10%).

Additional recent studies with women in prisons and girls in juvenile facilities indicate similarly high rates of victimization as well as expose the frequency of participants' experiences of polyvictimization and nonvictimization adversity (childhood experiences such as living with a substance-abusing parent, having a parent go to jail or prison, etc.). For instance, Lynch, Fritch, and Health (2012) found that 90% of women inmates reported physical and sexual violence from their partners in the year prior to incarceration and that many women described polyvictimization including chronic and severe abuse. DeHart (DeHart, 2009; DeHart & Moran, in press) interviewed justice-involved girls in group homes or long-term commitment and found that a majority had been victimized multiple times as well as experienced multiple adverse childhood events (ACEs; Felitti & Anda, 2009) such as death of a family member, caregiver imprisonment or addiction, or persistent family conflict. Belknap and Holsinger (2006) have suggested that we need to expand our conceptualization of childhood trauma in theories of girls' and women's pathways to offending to include not only experiences of interpersonal violence but also additional adverse events such as parental desertion, parental incarceration, and parental mental illness to best understand the range and extent of events affecting young women's entry into the criminal legal system.

Researchers have also begun to examine the nature and strength of associations between trauma and offending. Women who were abused or neglected as children are twice as likely to be arrested as adults than nonabused women (Widom, 2000). Grella, Stein, and Greenwell (2005), utilizing structural equation modeling with data collected from 440 adult women on parole, found that women who experienced interpersonal violence as children were more likely to engage in problematic behaviors as youths and subsequently to commit crimes as adults. In a qualitative study of 60 incarcerated women, DeHart (2008) reported that many of the women explicitly connected traumatic experiences (e.g., childhood sexual abuse) with the onset of criminal behaviors (e.g., running away, using illicit drugs). DeHart noted that the unrelenting nature of multiple traumas in conjunction with additional ACEs (e.g., caregiver use of drugs, abandonment, exploitation) normalizes behaviors like trading sex for shelter or drugs during adolescence or women retaliating violently against abusive partners. Similarly, Belknap and Holsinger (2006) noted that more than half the 163 system-involved girls they interviewed linked their abuse experiences with their subsequent offending. Furthermore, Surrat, Inciardi, Kurtz, and Kelly (2004, p. 51) reported that the 325 street sex workers they interviewed connected their substance abuse to "violent encounters in their daily lives." Thus, studies utilizing a variety of methods have suggested that women's experiences of interpersonal violence and mental health are connected to their onset of criminal offending.

The Role of Mental Health

First, there is clear evidence that traumatic experiences are linked to the risk of subsequent mental health difficulties. In several key studies conducted with representative samples of general community members, individuals with multiple experiences of trauma are at greater risk of developing psychological problems (Hedtke et al., 2008; Kessler, Sonnega, Bromet, Hughes, & Nelson, 1995; Turner, Finkelhor, & Ormrod, 2006). Next, Carlson and Shafer (2010) noted that mental

illness was associated with experiences of trauma in a sample composed of incarcerated males and females. Similarly, Lynch, Fritch, and Heath (2012) found that incarcerated women's lifetime experiences of interpersonal violence predicted greater severity of symptoms of depression, posttraumatic stress disorder (PTSD), general distress, and substance use. Tripodi and Pettus-Davis (2013) found that female prison inmates who were physically or sexually abused were more likely to have been previously hospitalized for emotional or psychological problems and to have a substance use disorder (SUD) than those without victimization histories. Taken together, the results of these studies suggest the increased vulnerability and overlapping pathways for women with substantial trauma histories for mental disorders such as PTSD, serious mental illness, and substance abuse or dependence.

James and Glaze (2006) determined that more than half of the jail inmates at midyear 2005 had mental health problems, with mental health problems being defined by a recent history (e.g., diagnosis or treatment) or symptoms of mental health disorders in the past 12 months as self-reported by local jail inmates. Rates of mental health problems for women (75%) were higher than those for men (63%), and inmates with mental health problems were 3 times as likely to report histories of physical and sexual abuse. Those jailed offenders with mental health problems also were more likely to be dependent on drugs, to be violent recidivists, and to have served three or more prior sentences. Within the jail facilities, these inmates were twice as likely to be charged with rule violations, four times as likely to be charged with assault on a correctional officer or another inmate, and three times as likely to be injured in a fight since admission. Although their study provided important information on characteristics of jailed offenders with and without mental health problems, James and Glaze did not utilize clinical diagnostic interviews to assess mental health problems. Thus, their prevalence figures and inferential findings warrant additional testing.

Using structured diagnostic interviews, Steadman and colleagues (2009) collected data from inmates at five jails in the U.S. Northeast and identified prevalence rates for current serious mental illness at 31% for women and 14.5% for men. Trestman, Ford, Zhang, and Wiesbrock (2007) assessed current and lifetime mental illnesses in clinical interviews that went beyond the scope of serious mental illness by also measuring anxiety disorders, personality disorders, and functional impairment of men and women inmates from all five adult jails in Connecticut. These researchers found that 65% of men and 77% of women had a history of mental illness and that women tended to have higher incidence of cooccurring disorders such as PTSD and substance use. These studies were rigorous in their assessment of mental disorders and provide valuable comparative data on prevalence rates for women relative to men However, given the focus on pathways in our article, it is also important to consider whether inmates experience mental health problems prior to incarceration or as a result of incarceration. Accordingly, we looked to Schnittiker, Massoglia, and Uggen (2012) who utilized data from the National Comorbidity Survey Replication to examine this issue. Their study involved diagnostic interviews administered via phone to a nationally representative sample of 5,692 adults, 14% of whom indicated they had previously been incarcerated. In their study, persons who had been incarcerated experienced higher rates of mental disorders than those who had not been incarcerated. Furthermore, most of the psychiatric disorders occurred *prior* to incarceration. This finding suggests that mental health may be a factor in the pathway to offending rather than arising solely as a consequence of incarceration.

The Current Study

Our study builds on this existing research by using in-depth data from a subset of women who first completed a structured diagnostic interview and subsequently were randomly selected to participate in a life history interview. We examine both traumatic experiences and mental disorders, specifically as these relate to the onset of different types of crime and delinquency. Our study has important implications regarding the role that trauma and mental health play in contributing to women's pathways to offending, particularly as these factors are considered in conjunction with one another and as elucidated by women's subjective insights regarding the nature of the relationships among trauma, mental health, and offending.

Method

Participants

Sampling was conducted in 2011–2012 from four geographic regions of the United States: the Southwest (represented by Colorado), Mid-Atlantic (Maryland and Virginia), Northwest (Idaho), and Deep South (South Carolina). Within each region, up to three counties were selected for sampling, with selected counties representing a variation across urban/rural classifications, crime and victimization trends, and inmates' demographics. The project was approved by human subjects review boards at each university and sampling site. At each site, correctional administrators provided researchers with a list of inmates from which participants were randomly sampled for structured diagnostic and qualitative interviews. Both types of interviews lasted about 2 hours each, and women were provided with participant incentives (e.g., direct deposit to canteen, snacks, purchase of books) of up to US$10 per interview as allowed by correctional policy at each site.

In sampling participants for structured diagnostic interviews across the four project sites, the overall decline rate was 20%, resulting in a sample of 491 women. Decline rates were markedly higher (e.g., up to 50%) at facilities where women did not receive direct compensation (e.g., donations were made to the facility's "general fund"), but these were dispersed across project sites and each site had some jails

allowing direct compensation. Although decline rates did not differ by age or type of offense, there were variations by ethnicity: Latinas were least likely to decline ($n = 12$, 15% decline rate) followed by African Americans ($n = 51$, 21%), Whites ($n = 71$, 25%), and American Indians ($n = 7$, 47%).

From within the overall sample of 491 structured interview participants, 1 in 4 women ($n = 123$) were randomly selected and invited to participate in additional qualitative life history interviews. Of the 123 women, 8 (7%) declined participation in the life history portion of our study, resulting in 115 participants across the four project sites. These women ranged in age from 17 to 55 years, with the mean and median age being 34 years. Women identified as White ($n = 47$, 41%), African American/Black ($n = 46$, 40%), Hispanic/Latina ($n = 12$, 10%), Native American ($n = 5$, 4%), and multiracial ($n = 5$, 4%). Of these women, 31 (27%) did not complete high school, another 31 (27%) completed high school or earned a *general equivalency diploma*, and 53 (46%) completed at least some college. Nearly half the women ($n = 55$) were employed prior to their incarceration, with a median income of approximately $15,000 (incomes in the past 12 months ranged from $0 to $200,000). These figures are analogous to demographics of the overall study sample (Lynch, DeHart, Belknap, & Green, 2012). The resulting sample of 115 is generous for qualitative research (Lee & Fielding, 1996; Swanson, 1986) and achieves sufficient statistical power for event-history analyses using collected life calendar data (Eliason, 1993).

Measures

Measures were delivered in two separate interviews. The first was a structured clinical interview that included assessment of demographics (age, education, income prior to incarceration, race/ethnicity, relationship status, parent status, charges, and length of sentence) and mental disorders. The second was a qualitative life history calendar interview that included assessment of violence exposure, nonvictimization adversity, crime, and other measures. All measures were administered orally by female interviewers who were working on or had completed their doctoral studies. Interviewer disciplinary affiliation and race/ethnicity were diverse within and across sites, with interviewers including psychologists, psychiatrists, sociologists, and social workers, as well as African Americans, Asians, Latinas, and Whites. All interviewers were trained on interview protocols through a combination of videos, in-person mentoring, and ongoing supervision.

Mental Disorders. Current and lifetime diagnoses for mental disorders were assessed using the World Health Organization's (WHO, 1990) Composite International Diagnostic Interview (CIDI), a widely used structured interview suitable for use by nonclinician interviewers and based on the criteria of the International Classification of Diseases, Version 10 (WHO, 1990) and *Diagnostic and Statistical Manual of Mental Disorders*, Fourth Edition (American Psychiatric Association, 1994). Example items are "Have you ever in your life had an attack of fear or panic when all of the sudden you felt very frightened, anxious, or uneasy?" and "Did you ever see a vision that other people could not see?" We administered the CIDI brief screening measure followed by full diagnostic modules (as appropriate to screening responses) for depression, mania, psychotic disorders, PTSD, and SUDs. Reliability and validity of the CIDI have been well demonstrated, with Cohen's κs on all sections ranging from .67 to .97 and with good concordance with standardized clinical assessments (Andrews & Peters, 1998; Haro et al., 2006; Wittchen, 1994).

Life History Calendar. Following completion of this structured diagnostic interview, a subset of women was invited to participate in the second, qualitative life history calendar interview. The Life History Calendar (LHC) is a tool to optimize accuracy in event timing/sequencing data (Axinn, Pearce, & Ghimire, 1999; Belli, 1998; Freedman, Thornton, Camburn, Alwin, & Young-DeMarco, 1988). The LHC tool is a calendar-like matrix, providing visual cues that enhance both interviewee and interviewer performance in mapping event history information. To facilitate lifetime recall in our study, column headings were organized in terms of major life stages (infancy/early childhood, mid/late childhood, early adolescence, mid/late adolescence, twenties, thirties, forties, fifties, and late adulthood). Row headings denoted categories of life events such as households/neighborhoods, relationship partners, crime/delinquency, and victimization. With the respondent's assistance, the interviewer mapped timing of memorable life experiences on the LHC (e.g., birth of a child) and recorded field notes about what women described for each event (e.g., lived with aunt). These salient cues provided a temporal context for recall of events that may be less salient in time (e.g., "The abuse happened when I was in eighth grade and lived with my aunt"). The LHC's rows and columns encourage recall at both thematic and temporal levels and thereby increase power of autobiographical memory (Axinn et al., 1999; Belli, 1998). This tool is also extremely useful in correctional settings where audio recording is frequently prohibited. In studies of offenders, Sutton and associates (Sutton, 2010; Sutton, Bellair, Kowalski, Light, & Hutcherson, 2011) found high test–retest reliability ($\kappa = .709$) as well as strong predictive validity of the self-report with official records (e.g., $\kappa = .715$). Here, as in that research, the LHC is an administration method, not a measure in itself. The calendar method was used to administer items verbatim from each of the following measures (e.g., for violence exposure, nonvictimization adversity), with each item denoted as a calendar row and responses recorded in these rows.

Rows for our calendar included school attended, homes lived in with household members, places where the woman worked, childhood family problems (nonvictimization adversity), relationship partners, pregnancy and children, substance use, crime and delinquency, violence exposure, mental health

treatment, identified turning points in life, and personal strengths and supports. For purposes of the present article, we focus on violence exposure, nonvictimization adversity, and crime/delinquency.

Violence Exposure. Our measure of exposure to violence was the Juvenile Victimization Questionnaire (JVQ; Hamby & Finkelhor, 2004), a rigorously constructed instrument, which includes items on child maltreatment, gang violence, dating violence, sexual victimization, and witnessing/indirect victimization, among other things. The JVQ demonstrates high internal consistency ($\alpha = .80$), adequate test–retest reliability ($r = .59$), and substantial construct validity with a variety of measures (Finkelhor, Hamby, Ormrod, & Turner, 2005). We used lifetime retrospective administration, an option provided in the full manual (Hamby, Finkelhor, Ormrod, & Turner, 2004), with the leading phrase of items modified accordingly (e.g., "In the last year, did anyone ... " was changed to "Can you think of a time someone ... "). Example items are "Can you think of a time someone tried to force you to have sex?" and "Can you think of a time you saw someone get attacked on purpose with a stick, rock, gun, knife, or other thing that would hurt?" Women were asked to describe the first time each event happened and each subsequent time if it happened more than once. Follow-up prompts addressed relationship to perpetrator, whether physical injury occurred, and questions specific to the victimization.

Nonvictimization Adversity. Adverse childhood events were measured using Turner, Finkelhor, and Ormrod's (2006) nonvictimization trauma and adversity items. Consistent with emerging theory on influence of ACEs on well-being (Felitti & Anda, 2009), these items measured constructs including family illnesses and deaths, caregiver unemployment or imprisonment, family addictions or mental disorders, and persistent family conflict. Example items are "Have there ever been any times when your mother, father, or guardian lost a job or couldn't find work?" and "Has there ever been a time that a family member drank or used drugs so often that it caused problems?"

Crime and Delinquency. We adapted prompts from previous studies of incarcerated women and girls (DeHart, 2008; DeHart & Moran, in press) to address alcohol and drug use; running away; shoplifting, stealing, burglary, or fraud; fighting or physical assault; using weapons or weapons offenses; drug dealing or drug offenses; driving under the influence or under suspension; and commercial sex work or trading sex for food, shelter, money, or drugs.

Mixed-Method Analyses

Quantitative analyses of life calendar event data were carried out using IBM Statistical Package for the Social Sciences software version 20.00 (IBM Software, Somers, NY). Descriptive statistics were computed to ascertain lifetime prevalence of mental disorders, substance use, offending, victimization, and childhood nonvictimization adversity. Participants' responses to the CIDI interview were utilized to determine the presence or absence of serious mental illness, PTSD, and SUD. If diagnostic criteria were met, we assigned a code of 1 (*present*); if not met, 0 (*absent*). LHC data were coded using the present/absent binary (1/0) codes to indicate at what age period events occurred, and time-to-onset variables were computed. These coded LHC data were then analyzed using life tables and survival analysis to elucidate patterns of offending over the life span.

In this type of analysis, the baseline hazard function describes a pattern of risk over time and indicates when a target event (e.g., first use of a weapon) is most likely to occur. Hazard and survival plots for different groups (e.g., women with and without serious mental illness) may be compared. To examine effects of covariates on risk trajectories for crime, we used Cox regression; this approach models the conditional probability of an event as a function of one or more covariates (e.g., commercial sex work as a function of childhood victimization), which are assumed to affect the underlying hazard multiplicatively (proportional across time). Singer and Willett (1991, p. 279) characterize the hazard model as "a powerful, flexible, and sensitive approach" for analysis of timing of events, offering great potential for examining women's pathways to jail. For our analyses, we examined the role of covariates including serious mental illness, SUD, PTSD, various types of victimization, and childhood nonvictimization adversity. Forward stepwise entry with an entry criterion of $p < .05$ was used for covariates, and Peto–Breslow's estimation of the baseline hazard adjusted for ties.

Qualitative transcripts based on women's narratives were coded and analyzed using MaxQDA software (VERBI GmbH Berlin, Germany). The qualitative software allows the researcher to mark text passages and tag these with commentary or codes (e.g., "intimate partner violence"). Codes may be organized into hierarchies, and participant files can be grouped into "families" or categories (e.g., "women with serious mental illness"). Coding was performed by the first author and then reviewed by the second author; next, irregularities or omissions were discussed, and coding then was refined based on consensus. For purposes of the present report, we used a first-cycle coding method with provisional top-down coding based on categories of items in women's interviews.

This mixed-method approach allowed us to identify specific qualitative exemplars to illustrate findings revealed in quantitative analysis of interview data. For instance, if a significant association was revealed in our regression analysis (e.g., X was related to Y), we then retrieved all qualitative quotes dually coded with the relevant variables (e.g., overlapping qualitative codes of X and Y) and then examined these quotes for information that would shed light on the nature of the relationship between variables (e.g., Y occurs in response to X). Representative quotes from women's narratives are

exerpted in the following to illustrate these relationships. We chose to present these quotes using a third-person perspective to underscore that these are not direct quotations, in that thoughts have been necessarily filtered through the interviewer in the transcription process. However, we have attempted to use the women's own words whenever possible. Pseudonyms are used to protect confidentiality of participants.

Results

Prevalence Rates

Mental Disorders. A major focus of our study concerns the role of mental disorders in women's offending. The vast majority of women in our sample ($n = 98$, 85%) met diagnostic criteria for a lifetime SUD (abuse or dependence). Approximately half ($n = 59$, 51%) also suffered from PTSD at some point in their lifetimes. Finally, half the women ($n = 57$, 50%) in the sample met diagnostic criteria for at least one form of serious mental illness (e.g., major depression, bipolar disorders, or psychotic spectrum disorders) during their lifetime. The qualitative accounts provide a glimpse into the cooccurrence and interrelatedness of mental health problems with victimization and substance use. For example,

> Mackenzie (age 28, probation violation) was diagnosed with bipolar disorder and PTSD at 19. Her family doctor said she had PTSD from being molested as a child. She also had the baby blues after her second kid; smoking weed helped . . . . Mackenzie has been on five or six antidepressants and mood stabilizers . . . . At 25, she saw a counselor through state funding for about 6 to 8 months. She attended AA [Alcoholics Anonymous] and NA [Narcotics Anonymous] from age 25 to age 27.

Substance Use. The majority of women reported that at some point in their lives they used alcohol ($n = 93$, 82%), marijuana ($n = 96$, 84%), psychostimulants ($n = 82$, 71%; e.g., cocaine, crack, methamphetamine), or other drugs ($n = 60$, 60%; e.g., Lysergic acid diethylamide, heroin, Oxycodone, inhalants). Women often recounted polydrug use and lifelong struggles with substance abuse. For example,

> Joanna (age 44, probation violation) started drinking, smoking cigarettes and weed at age 14 with her friends. She also tried 'shrooms [mushrooms] twice at age 14. At 16, she tried cocaine and at 18, she did acid a handful of times . . . . The only time she didn't use alcohol or drugs was when she was pregnant . . . . At age 25, her life changed, she started using meth. It's now her drug of choice.

> Holly (age 24, shoplifting) tries to quit [using] every other day, but is constantly dope-sick. Being dope-sick all the time, you start to think to yourself, "Why am I trying?" . . . . Rehab was like a bubble, but when she was home there were so many other factors to deal with. There were constant reminders of "H" [heroin] all around her—it made staying clean impossible. Like the hospital signs on the side of the highway—they have an "H" with an arrow pointing toward her dealer's house.

Table 1. Prevalence of Self-Reported Lifetime Offending ($N = 115$).

Type of Offense	*n* (%)
Shoplifting, stealing, burglary, or fraud	86 (75)
Dealing drugs or getting drug charges	73 (64)
Fighting or physical assault	64 (56)
Running away (prior to age 18)	49 (43)
Commercial sex work or trading sex	46 (40)
Driving under the influence or under suspension	43 (37)
Carrying weapons or weapons offenses	38 (33)

Offending. Table 1 shows women's self-reported lifetime offending. Nearly three quarters of women reported committing property offenses (shoplifting, stealing, burglary, or fraud). Over half the women reported dealing drugs or getting drug charges and fighting or physical assault, and over a third reported offenses such as running away, carrying weapons, driving under the influence, or commercial sex work.

Victimization and Adversity. As illustrated in Table 2, sexual violence was experienced by 86% of women in the sample. Rates were particularly high for molestation by an adult prior to age 16 as well as for forcible rape after age 16. In fact, sexual victimization of each specific type (statutory rape, partner rape, drug-facilitated assaults) was reported by at least 20% of women. Intimate partner violence—particularly physical abuse—was exceedingly common. Women also frequently experienced child physical and psychological abuse, and they commonly witnessed violence in their homes and communities. Nonfamilial/nonintimate attacks were predominated by bullying or harassment, although about one in five women experienced major physical assaults by strangers or acquaintances. Most women experienced multiple types of victimization.

Women's self-reported experiences of nonvictimization adversity were indicative of the multiproblem families in which women grew up. Women reported high rates of adverse childhood experiences including caregivers using alcohol and drugs at levels that caused problems (63%), death or serious illness of a loved one (60%), persistent family conflict (54%), caregiver mental health problems (41%), and caregiver incarceration (27%).

Event-History Modeling

We used event-history modeling (survival analysis and Cox regression) to examine predictor variables of interest (e.g., trauma, adversity) as these related to risk trajectories for substance use and offending as outcome variables for women with and without mental illness. We began by examining baseline hazards (risk for onset of offending during each time period over the life span) for women with and without mental illness over different types of offenses (e.g., substance use,

Table 2. Prevalence of Self-Reported Lifetime Victimization ($N = 115$).

Women's Victimization Experiences	*n* (%)
Any caregiver violence (prior to age 18)	69 (60)
Physical abuse	56 (49)
Use of weapon	35 (30)
Psychological abuse	49 (43)
Neglect	23 (20)
Parental kidnapping or custodial interference	8 (7)
Any partner violence	88 (77)
Physical abuse	82 (71)
Use of weapon	55 (48)
Partner rape	28 (24)
Any nonfamilial violence	72 (63)
Gang or group attack	15 (13)
Stranger/acquaintance attack	24 (21)
Stranger/acquaintance use of weapon	25 (22)
Bullying or harassment	54 (47)
Any sexual violence	99 (86)
Molestation by adult (prior to age 16)	55 (48)
Molestation by peers (prior to age 16)	29 (25)
Statutory rape (prior to age 16)	24 (21)
Partner rape (age 16 or older)	28 (24)
Other forcible rape (age 16 or older)	45 (39)
Alcohol/drug-enabled sexual assault	24 (21)
Any witnessed violence	84 (73)
Witnessed caregiver violence	52 (45)
Witnessed a bad attack	53 (46)
Witnessed a murder or dead body	46 (40)
Number of major types of victimization	
No victimization	2 (2)
One type	6 (5)
Two types	17 (15)
Three types	25 (22)
Four types	28 (24)
Five types	37 (32)

running away, driving under the influence). If the baseline hazards indicated differential risk for offending by women with mental illness versus those without, we stratified the sample by mental health status in subsequent analyses; this formed two groups of women (those with mental illness and those without) and allowed visual inspection of distinct risk patterns for each group. Each of the following Cox regression equations (stratified and nonstratified) includes time-to-onset of substance use or offending as the dependent variable and independent variables including indicators of SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, and childhood nonvictimization adversity.

Onset of Substance Use. Of the 110 women experiencing substance use, 55 showed no signs of serious mental illness and the other 55 did. Preliminary analyses of actuarial survival functions indicated significant differences between baseline hazards for substance use by women with mental illness versus those without serious mental illness, $\chi^2(1) = 9.74$, $p = .002$. That is, in considering risk of substance use for each time period across the life span, women with serious mental illness were at greater risk for onset of substance use at each time period. We therefore stratified the sample into these two groups of women for subsequent Cox regression analyses for effects of independent variables (i.e., SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, childhood nonvictimization adversity) on time-to-onset of substance use. Of the covariates, only SUD was a significant predictor of time-to-onset of substance use, $\chi^2(1) = 7.39$, $p = .007$. The hazard ratio of 2.28 indicates that women with SUD were at more than twice the risk for onset of substance use relative to those who did not meet SUD diagnostic criteria.

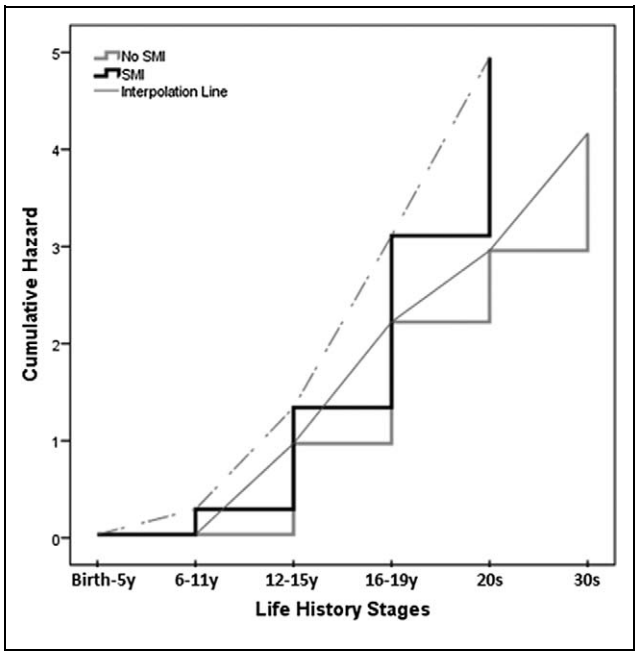

Figure 1. Interpolated hazard at the mean of covariates for onset of *substance use* where SMI = an assessment of serious mental illness (depression, bipolar disorder, or any psychotic disorder).

Here, we present figures that show the interpolated hazard functions (risk for onset of offending during each time period over the life span) at the mean of covariates in the model (independent variables), with distinct functions (lines) shown for women with and without mental illness. Thus in Figure 1, the stair step lines indicate the cumulative, incremental probability for onset of substance abuse across each stage of life history. The interpolation line smooths out the increments, providing a means of estimating the hazard function at intermediate points. Because we stratified our sample, we can see separate lines for women with mental illness and those without mental illness. As can be seen in Figure 1, women with serious mental illness had elevated risk for onset of substance use during each time period across the life span, with this difference being particularly evident in women's late teens and twenties.

Women's qualitative accounts indicated that mental health problems such as depression often stemmed from experiences of victimization or loss and were intertwined with women's self-medicating with alcohol and drugs. For example, Roxanne describes using substances to cope with physical and psychological victimization in childhood and adulthood:

> Roxanne (age 41, possession of a controlled substance) reports that mental health problems have affected her life a lot. She saw her first counselor when her daughter died in the fire . . . . [Describing her own victimization], Roxanne states that she was not hurt so much physically but was always hurt more by verbal and mental abuse. The slaps and punches go away but the "words and verbal abuse leave permanent scars in your mind." She is now on meds for anxiety, panic attacks. She also had these problems when she was out of jail, but self-medicated with Percocet, morphine pills, and Benadryl.

Onset of Running Away. Of the 48 women who ran away as youth, 19 showed no signs of serious mental illness and the other 29 did. Preliminary analyses of actuarial survival functions indicated significant differences in baseline hazards between women with serious mental illness and those without serious mental illness for onset of running away, $\chi^2(1) = 4.68$, $p = .03$. That is, in considering risk of running away for each time period across the women's youth, those with serious mental illness were at greater risk for running away. We therefore stratified the sample into these two groups of women for subsequent Cox regression analyses for effects of independent variables (i.e., SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, childhood nonvictimization adversity) on time-to-onset of running away. Of the covariates, only caregiver violence (e.g., physical and psychological abuse, neglect, or parental kidnapping) was a significant predictor of running away, $\chi^2(1) = 15.00$, $p < .001$. The hazard ratio of 4.03 indicates that women who were abused or neglected were at more than 4 times the risk of running away relative to those who were not maltreated.

Figure 2 shows that women with serious mental illness had elevated risk for running away during each time period across their youth, with this pattern showing a marked increase in risk as the girls reached pubescence in their early teens. In their qualitative accounts, women often described running away as a means of ending abuse from caregivers. For example,

> Octavia's (age 35, possession of drug paraphernalia) mom abused her until she was 14 and ran away. When Octavia was 11, her mom started punching her . . . . Her mom hit her with extension cords—whatever—hangers, belts. And her mom also called her names and said mean things to her the whole time. There was a lot of neglect. They didn't go to the doctor for stuff, they just had to deal with it.

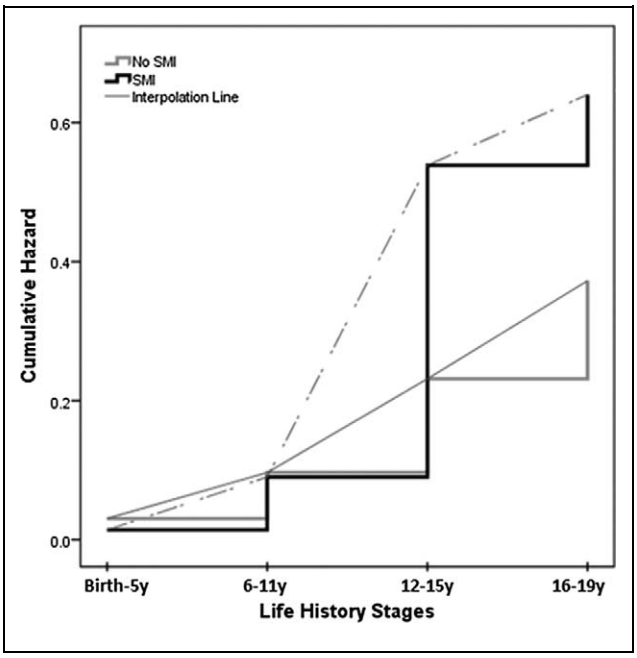

Figure 2. Interpolated hazard at the mean of covariates for onset of *running away* where SMI = an assessment of serious mental illness (depression, bipolar disorder, or any psychotic disorder).

Onset of Fighting or Physical Assault. Preliminary analyses did not show significant differences in the baseline hazards between women with mental illness and those without mental illness for onset of fighting or assaulting others, $\chi^2(1) = 3.03$, $p = .082$. We therefore pooled all women for subsequent Cox regression analyses for effects of independent variables (i.e., SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, childhood nonvictimization adversity) on time-to-onset of fighting/assaults. Of the covariates, only witnessing violence was a significant predictor of time-to-onset of fighting, $\chi^2(1) = 4.83$, $p = .028$. The hazard ratio of 2.00 indicates that women who witnessed violence were at twice the risk for fighting or assaulting others relative to those who did not witness violence.

Women's narratives revealed that women's fighting and assaults were frequently responses to witnessed violence in their homes and communities, as in the following account:

> Tamera (age 53, prostitution) once had a physical altercation with her brother because he was beating their grandmother. Tamera hit him with a lamp. It was better that her brother fight with her than with her grandmother. Tamera thinks her brother was abusive because of how their grandfather behaved and messed them all up.

Onset of Property Crimes. Preliminary analyses did not show significant differences in the baseline hazards between women with mental illness and those without mental illness

for onset of property crimes, $\chi^2(1) = 2.59$, $p = .108$. We therefore pooled all women for subsequent Cox regression analyses for effects of independent variables (i.e., SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, childhood nonvictimization adversity) on time-to-onset of property crimes. Both witnessing violence, $\chi^2(1) = 4.59$, $p = .032$, and partner violence, $\chi^2(1) = 4.49$, $p = .034$, were significant predictors of time-to-onset of property crimes. The hazard ratios of 1.77 for witnessing violence and 1.86 for partner violence indicate that women who experienced these forms of violent victimization were at nearly twice the risk for committing property crimes relative to those who did not experience those forms of victimization.

Examination of women's narratives did not reveal overt links between witnessing violence or partner violence and committing property crimes. However, examination of specific cases revealed that these factors often coexisted in criminally involved family or social networks. This pattern is exemplified by the statement of one active shoplifter, Erin (age 27, assault), who says: "Being physically violent is the norm for the people she does drugs with. People become high and argue over small things."

Onset of Weapons Use. Recall that fewer women endorsed weapons use or offenses (33%) as compared to other criminal behaviors. Preliminary analyses did not show significant differences in the baseline hazards between women with mental illness and those without mental illness for onset of weapons use, $\chi^2(1) = .637$, $p = .425$. We therefore pooled all women for subsequent Cox regression analyses for effects of independent variables (i.e., SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, childhood nonvictimization adversity) on time-to-onset of weapons use. Of the covariates, only witnessing violence was a significant predictor of time-to-onset of fighting, $\chi^2(1) = 11.81$, $p = .001$. The hazard ratio of 8.13 indicates that women who witnessed violence were at 8 times the risk for using weapons relative to those who did not witness violence.

Most commonly, women described carrying weapons in a protective manner, often as a result of witnessed violence or social norms in "rough" neighborhoods. For example, Marjorie (age 46, assault) described carrying a knife in high school: "That was back in the day when everybody carried one. Back then, children were not using guns. They would have fistfights, carry around box cutters."

Onset of Drug Dealing/Charges. Of the 73 women who sold drugs or were charged with drug offenses, 32 showed no signs of serious mental illness and the other 41 did. Preliminary analyses of actuarial survival functions indicated significant differences between women with and without serious mental illness for onset of drug dealing/offenses, $\chi^2(1) = 3.99$, $p = .046$. That is, in considering risk of drug offending for each time period across the life span, women with serious mental illness were at greater risk for drug offending. We therefore stratified the sample into these two groups of women for subsequent Cox regression analyses for effects of independent variables (i.e., SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, childhood nonvictimization adversity) on time-to-onset of drug offenses. Of the covariates, only partner violence was a significant predictor of time-to-onset of drug offending, $\chi^2(1) = 5.77$, $p = .016$. The hazard ratio of 2.24 indicates that women with violent partners were at more than twice the risk for onset of drug offending relative to those who did not have violent partners.

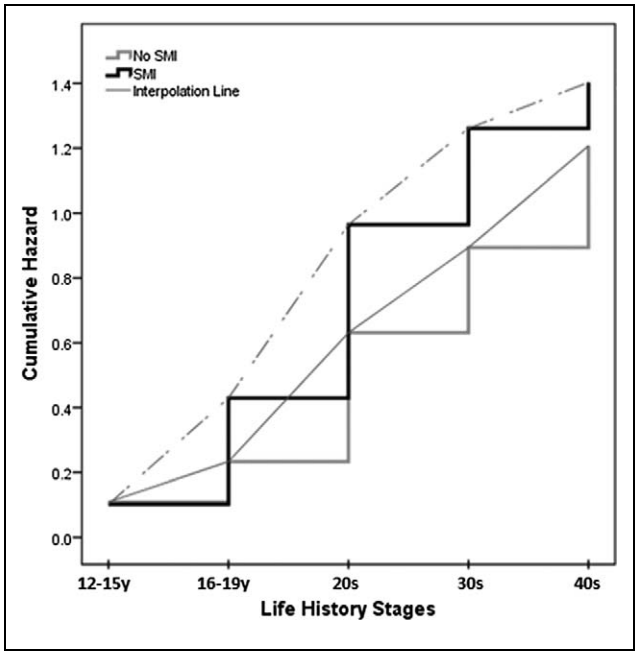

Figure 3. Interpolated hazard at the mean of covariates for onset of *drug offenses* where SMI = an assessment of serious mental illness (depression, bipolar disorder, or any psychotic disorder).

Figure 3 shows that women with serious mental illness had elevated risk for onset of drug offending across the life span, with this difference beginning in the late teens and continuing into adulthood. Although coercion to sell or use drugs was present in some women's stories, more commonly the women described violent men as their cooffenders in the drug trade. For example:

> Claudine's (age 35, fraud) husband was nice in the beginning. Claudine loved him. When they were using together, it turned awful . . . . he got out of prison, and they started selling dope together because they wanted more money. At 30, Claudine was sending drugs through the mail and just loving the money and all the drugs that went with it. But it was horrible on the streets. They had to rob and steal. Her husband carried a gun, and they robbed people with it. He held out a gun to her about five times in their relationship and told her the only reason he didn't shoot her was because she was the mother of his kids.

> One time, Claudine tried to take the gun away from him, and it went off, scraping her foot. They both started laughing about it; they were both high at the time.

Onset of Driving Violations. Preliminary analyses did not show significant differences in the baseline hazards between women with mental illness and those without mental illness for onset of driving violations (e.g., driving under the influence or under suspension), $\chi^2(1) = .418$, $p = .518$. We therefore pooled all women for subsequent Cox regression analyses for effects of independent variables (i.e., SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, childhood nonvictimization adversity) on time-to-onset for driving violations. Of the covariates, only SUD was a significant predictor of time-to-onset of substance use, $\chi^2(1) = 4.57$, $p = .033$. The hazard ratio of 6.53 indicates that women who met diagnostic criteria for SUD were at more than 6 times the risk for driving violations relative to those who did not have SUD.[1] The role of SUD in driving under the influence is obvious and is exemplified in women's narratives, such as:

> With her fifth and most recent DUI, Delores (age 55, driving under the influence) was blacked out. She does remember that she had started to drink in her apartment, and it was St. Patrick's Day . . . . When she woke up in jail, she thought her DUI had been at night, but then found out it had been at 7 AM . . . . Delores guesses that she must have woken up and guzzled vodka.

Onset of Sex Work. Preliminary analyses did not show significant differences in the baseline hazards between women with mental illness and those without mental illness for onset of sex work, $\chi^2(1) = 1.38$, $p = .241$. We therefore pooled all women for subsequent Cox regression analyses for effects of independent variables (i.e., SUD, PTSD, caregiver violence, partner violence, nonfamilial violence, sexual violence, witnessing violence, childhood nonvictimization adversity) on time-to-onset for sex work. Of the covariates, only partner violence was a significant predictor of time-to-onset of sex work, $\chi^2(1) = 7.74$, $p = .005$. The hazard ratio of 4.55 indicates that women who had violent partners were at over 4 times the risk for sex work relative to those who did not have violent partners. Women frequently described getting involved in commercial sex work with the encouragement or coercion of violent men who vacillated between roles of boyfriends, dealers, and pimps. Two examples illustrate:

> In Clarice's (age 36, probation violation) late 20s, she was having sex for money. It started when she ran out of money one night and the drug dealer made a proposal. Usually she had sex with the dealer . . . . But she did start doing it with the Mexicans and everything. There was a lot of regret associated with that. She never got any diseases, just a lot of regret. It made her feel dirty and cheap.

> Pamela (age 31, driving under suspension) was physically beaten by pimps from age 17 on. If she went outside, she'd get her ass beat. If she'd mosey away from them and start to fall in love with someone that she tricked with, she'd get her ass beat. Pamela wasn't allowed to have any feelings for customers. She wasn't allowed to have a cell phone. She wasn't allowed to communicate with anybody.

Discussion

The purpose of our study was to examine how pathways to jail may differ for women with and without serious mental illness, with attention to the contributing role of trauma in childhood and adulthood. Findings indicated high prevalence of mental disorders and trauma among women in jails. Further, women with serious mental illness appeared to be at elevated risk for certain types of offending, and victimization—particularly caregiver violence, witnessing violence, and intimate partner violence—were associated with earlier onset of offending. These relationships are consistent with theories on gendered pathways to offending (Salisbury & Van Voorhis, 2009) and may provide insight into the mechanisms by which such factors impact offending. In the following we discuss our specific findings, limitations of our study, and implications for practice and policy.

Mental Health and Offending

Our national sample of women in jails demonstrated high rates of mental disorders, with a majority of our participants meeting lifetime diagnostic criteria for serious mental illness, PTSD, and SUD. Jailed women with serious mental illness were at higher risk in childhood for running away and at higher risk across the life span for substance use and drug offending. These findings underscore the importance of partnerships between mental health and justice systems, including approaches that address girls' and women's complex treatment needs (e.g., cooccurring disorders). Although informal collaboration among professionals within these systems sometimes exists, it is important to institutionalize protocols for coordinated response. Models such as the sequential intercept model (Munetz & Griffin, 2006)—in which potential intervention points are established to keep individuals from becoming deeply enmeshed in the justice system—offer promise for identifying treatment needs of women at various stages of systemic involvement (e.g., by law enforcement and emergency services, at pretrial hearings, in jails and prisons, at reentry). These findings also support the need for corrections-based or community-based treatment for system-involved women, as well as for clinical and legal advocacy for women with cooccurring disorders.

Lifetime PTSD did not contribute unique variance in predicting onset of women's offending beyond that already

predicted by victimization experiences or other mental disorders; it is possible that the salience of traumatic experiences subsume posttraumatic stress in predicting onset of offending. Alternatively, comorbidity of PTSD with other mental disorders in the equation (i.e., serious mental illness, SUDs) may attenuate relationships between PTSD and offending. Not surprisingly, SUD was related to earlier onset of substance use and driving under the influence.

Substance use disorder was a significant contributor to risk for onset of substance use, driving under the influence, and commercial sex work. That is, in considering risk for offending at each time period over the life span, women with SUD were at higher risk for each of these types of offenses.

Victimization and Offending

As noted, various forms of traumatic victimization played an important role in the onset of offending. We found that intimate partner violence was associated with women's property crime, drug offending, and commercial sex work. These relationships seemed to relate to intimate involvement with violent men who fluctuated between roles as the women's cooffenders, drug dealers, and pimps. Witnessing violence was associated with property crimes, engaging in fighting and assaults, and use of weapons. Sometimes these relationships stemmed from affiliation with criminal networks, and often women's use of weapons or aggression arose from efforts to protect themselves or others. One of the stronger associations was between experiences of caregiver violence and running away as a teen. This finding supports a growing body of evidence that runaway youth often enact this behavior as a means of escaping intolerable maltreatment at home (Chesney-Lind & Shelden, 1992). Living on the streets, in turn, is associated with greater substance use (Tompsett, Domoff, & Toro, 2013) and may further youth involvement in other types of offending. These findings highlight the need for trauma-informed approaches (Harris & Fallot, 2001) to working with system-involved women and girls, as well as the critical need for risk reduction and intervention to address the pervasive violence in these persons' lives. This violence not only characterizes the family, relationship, and neighborhood histories of justice-involved women, it also presents likely contexts into which women will be released after jail or imprisonment.

Limitations of Our Research

Although our study involved a large sample from multiple states, our research does have limitations. First, because we focused on adult women in U.S. jails, these findings may not generalize to more youthful offenders, males, or persons in longer-term correctional facilities. Trestman and colleagues (2007) also underscored the importance of considering differences in treatment resources in jails versus prisons. Specifically, compared to prisons, jails are generally run by individual counties and therefore may have fewer resources for mental health assessment, treatment, and programming (Trestman, Ford, Zhang, & Wiesbrock, 2007). With pervasive budget cuts, the situations may be worsening, and some counties indicate major increases in the number of mentally ill offenders housed in jails in recent years (Wiener, 2012).

Our study also focused on serious mental illness as defined in recent research (Steadman, Osher, Robbins, Case, & Samuels, 2009). Due to time limitations, we did not assess the full spectrum of anxiety disorders nor did we assess personality disorders. Thus, we cannot address the extent to which these disorders may affect onset of offending. Further, we cannot attest to whether comorbidity of personality disorders with other mental disorders may have implications for women's pathways to jail. Finally, it is important to acknowledge that these analyses depend on retrospective accounts of women's life experiences. Although the use of the calendar format in life history interviews has demonstrated greater accuracy in recall that typical self-report interview formats (Sutton, 2010; Sutton et al., 2011), we must still recognize there are limitations inherent in the use of retrospective accounts.

Implications for Scientific Understanding

The potential impact of our project is multifold. Understanding women offenders' pathways to offending helps elucidate the complexity of their experiences and identify key factors and intervening variables that may ameliorate or exacerbate risk. Our study sheds light on the intersection of victimization and mental health in women's pathways to offending, including factors such as abusive childhood homes, violent relationships, crime-ridden neighborhoods, and attempts to self-medicate through substance abuse. Our findings also elucidate ways in which different types of offending might derive from pivotal life experiences, such as in the association between childhood maltreatment and running away.

Practice Implications

Our study provides powerful information to community service providers who might develop prevention and risk reduction programs for system-involved girls and women. Existing studies (e.g., Trestman et al., 2007) note that many offenders with serious mental illness are not identified as mentally ill upon entry into the system. Given that mental health problems in offenders are linked to greater likelihood of violent crimes, longer sentences, rule violations, and physical assaults in the corrections environment (James & Glaze, 2006), greater knowledge and understanding of these offenders and their needs is critical for the success of behavioral health treatment programs, jail management, and correctional staff safety. In particular, partnerships among justice systems, mental health systems, and substance abuse services are needed to implement early screening, diversion programs,

detoxification, targeted treatment in jails and prisons, and support services for women's reentry into communities. Our findings can be useful to professionals working not only in juvenile and adult investigation, courts, and corrections, but also in child welfare and youth services, substance abuse and rehabilitation services, housing and employment services, and services for persons with special needs. The research is critical to development of gender-responsive programming (Hills, Siegfried, & Ickowitz, 2004), alternatives to incarceration, and problem-solving court initiatives that address girls' and women's specific needs. These are all important components for informing justice practice and policy at the federal, state, and local level to develop effective contexts for primary, secondary, and tertiary prevention.

Acknowledgments

Thanks to Jemima Anglade, Alina Bonci, Porschia Brown, Toyin Falebita, Pat Heiber, Kelsie Hendrickson, Ania Hornberger, Alejandra Hurtado, Kristine Johnson, Beena Kuruvilla, Andrea Lamont, Katherine Martinez, Anjali Nandi, Kathryn Nowotny, Sarah Rowland, Adriana Serrano, Nitika Sharma, Caeleigh Shellhart, Emily Van Ness, Elizabeth Whalley, and Alexa Worthington for assistance with interviewing and for performing other research tasks.

Authors' Note

Points of view in this document are those of the authors and do not necessarily represent the official position or policies of the U.S. Department of Justice.

Declaration of Conflicting Interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The author(s) disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: This project was supported by Grant 2010-DB-BX-K048 awarded by the Bureau of Justice Assistance, Office of Justice Programs, U.S. Department of Justice.

Note

1. Experiencing legal problems pertaining to substance use allows individuals to meet diagnostic criteria for a substance *abuse* disorder. However, multiple symptoms are necessary to meet criteria for substance *dependence* disorders. To assure that the relationship between driving under the influence (DUI) and substance use disorder was not confounded, we conducted exploratory analyses using only those cases in which individuals did not meet abuse criteria. Findings were nearly identical to those presented here, with substance use disorder (SUD) as the sole predictor of DUI onset.

References

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders* (4th ed.).Washington, DC: Author.

Andrews, G., & Peters, L. (1998). The psychometric properties of the composite international diagnostic interview. *Social Psychiatry and Psychiatric Epidemiology*, *33*, 80–88.

Asberg, K., & Renk, K. (2012). Substance use coping as a mediator of the relationship between trauma symptoms and substance use consequences among incarcerated females with sexual abuse histories. *Substance Use & Misuse*, *47*, 799–808.

Axinn, W., Pearce, L., & Ghimire, D. (1999). Innovations in life history calendar applications. *Social Science Research*, *28*, 243–264.

Belknap, J., & Holsinger, K. (2006). The gendered nature of risk factors for delinquency. *Feminist Criminology*, *1*, 48–71.

Belli, R. (1998). The structure of autobiographical memory and the event history calendar: Potential improvements in the quality of retrospective reports in surveys. *Memory*, *6*, 383–406.

Brennan, T., Breitenbach, M., Dieterich, W., Salisbury, E., & Van Voorhis, P. (2012). Women's pathways to serious and habitual crime: A person-centered analysis incorporating gender responsive factors. *Criminal Justice and Behavior*, *39*, 1481–1508.

Browne, A., Miller, B., & Maguin, E. (1999). Prevalence and severity of lifetime physical and sexual victimization among incarcerated women. *International Journal of Law & Psychiatry*, *22*, 301–322.

Carlson, B., & Shafer, M. (2010). Traumatic histories and stressful life events of incarcerated parents: Childhood and adult trauma histories. *The Prison Journal*, *90*, 475–493.

Chesney-Lind, M., & Shelden, R. (1992). *Girls, delinquency, and juvenile justice*. Pacific Grove, CA: Brooks/Cole.

DeHart, D. D. (2008). Pathways to prison: Impact of victimization in the lives of incarcerated women. *Violence Against Women*, *14*, 1362–1381.

DeHart, D. D. (2009). *Polyvictimization among girls in the juvenile justice system: Manifestations and associations to delinquency* (Report No. 228620). Washington, DC: U.S. Department of Justice.

DeHart, D. D., & Moran, R. (in press). Poly-victimization among girls in the justice system: Trajectories of risk and associations to juvenile offending. *Violence Against Women*.

Eliason, S. (1993). *Maximum likelihood estimation: Logic and practice*. Newberry Park, CA: Sage.

Felitti, V., & Anda, R. (2009). The relationship of adverse childhood experiences to adult medical disease, psychiatric disorders, and sexual behavior: Implications for healthcare. In R. Lanius & E. Vermetten (Eds.), *The hidden epidemic: The impact of early life trauma on health and disease* (pp. 1–18). Cambridge, MA: Cambridge University Press.

Finkelhor, D., Hamby, S., Ormrod, R., & Turner, H. (2005). The juvenile victimization questionnaire: Reliability, validity, and national norms. *Child Abuse & Neglect*, *29*, 383–412.

Freedman, D., Thornton, A., Camburn, D., Alwin, D., & Young-DeMarco, L. (1988). The life history calendar: A technique for collecting retrospective data. *Sociological Methodology*, *18*, 37–68.

Gaarder, E., & Belknap, J. (2002). Tenuous borders: Girls transferred to adult court. *Criminology*, *40*, 481–517.

Green, B. L., Miranda, J., Daroowalla, A., & Siddique, J. (2005). Trauma exposure, mental health functioning and program needs of women in jail. *Crime and Delinquency*, *51*, 133–151.

Grella, C. E., Stein, J. A., & Greenwell, L. (2005). Associations among childhood trauma, adolescent behavior problems, and adverse adult outcomes in substance-abusing women offenders. *Psychology of Addictive Behaviors*, *19*, 43–53.

Hamby, S., & Finkelhor, D. (2004). *The comprehensive juvenile victimization questionnaire*. Durham, NH: Crimes against Children Research Center.

Hamby, S., Finkelhor, D., Ormrod, R., & Turner, H. (2004). *The Juvenile Victimization Questionnaire (JVQ): Administration and scoring manual*. Durham, NH: Crimes against Children Research Center.

Haro, J., Arbabzadeh-Bouchez, S., Brugha, T., DeGirolamo, G., Guyer, M., Jin, R., . . . Kessler, R. (2006). Concordance of the composite international diagnostic interview version 3.0 with standardized clinical assessments in the WHO World Mental Health Surveys. *International Journal of Methods in Psychiatric Research*, *15*, 167–180.

Harris, M., & Fallot, R. (2001). *Using trauma theory to design service systems*. San Francisco, CA: Jossey-Bass.

Hedtke, K. A., Ruggiero, K. J., Fitzgerald, M. M, Zinzow, H. M., Saunders, B. E., Resnick, H. S., . . . Kilpatrick, D. G. (2008). A longitudinal investigation of interpersonal violence in relation to mental health and substance use. *Journal of Consulting & Clinical Psychology*, *76*, 633–647.

Hills, H., Siegfried, C., & Ickowitz, A. (2004). *Effective prison mental health services: Guidelines to expand and improve treatment*. Washington DC: U.S. Department of Justice.

James, D., & Glaze, L. (2006). *Mental health problems of prison and jail inmates* (Bureau of Justice Statistics Special Report). Washington, DC: United States Department of Justice.

James, D. J. (2004). *Profile of jail inmates 2002*. Washington, DC: U.S. Department of Justice, Office of Justice Programs, Bureau of Justice Statistics.

Kessler, R. C., Sonnega, A., Bromet, E., Hughes, M., & Nelson, C. B. (1995). Posttraumatic stress disorder in the National Comorbidity Survey. *Archives of General Psychiatry*, *52*, 1048–1060.

Lee, R., & Fielding, N. (1996). Computer-assisted qualitative data analysis: The user's perspective. In F. Faulbaum & W. Bandilla (Eds.), *SOFTSTAT '95: Advances in statistical software 5* (pp. 1–24). Stuttgart, Germany: Lucius.

Liska, A. E., Markowitz, F. E., Whaley, R. B., & Bellair, P. (1999). Modeling the relationship between the criminal justice and mental health systems. *American Journal of Sociology*, *104*, 1744–1775.

Lurigio, A. (2012). Responding to the needs of people with mental illness in the criminal justice system: An area ripe for research and community partnerships. *Journal of Crime and Justice*, *35*, 1–12.

Lynch, S., DeHart, D., Belknap, J., & Green, B. (2012). *Women's pathways to jail: The roles and intersections of serious mental illness & trauma*. Washington, DC: U.S. Department of Justice, Bureau of Justice Assistance.

Lynch, S., Fritch, A., & Heath, N. (2012). Looking beneath the surface: The nature of incarcerated women's experiences of interpersonal violence, treatment needs, and mental health. *Feminist Criminology*, *7*, 381–400.

McDaniels-Wilson, C., & Belknap, J. (2008). The extensive sexual violation and sexual abuse histories of incarcerated women. *Violence Against Women*, *14*, 1090–1127.

Minton, T. D. (2013). *Jail inmates at midyear 2012—Statistical tables*. Washington, DC: U.S. Department of Justice.

Munetz, M., & Griffin, P. (2006). Use of the sequential intercept model as an approach to decriminalization of people with serious mental illness. *Psychiatric Services*, *57*, 544–549.

Salisbury, E., & Van Voorhis, P. (2009). Gendered pathways: A quantitative investigation of women probationers' paths to incarceration. *Criminal Justice and Behavior*, *36*, 541–566.

SC Department of Mental Health. (2006). *Pilot survey of persons with mental illnesses in SC jails—July 1, 2007 to June 30, 2008*. Retrieved from state.sc.us/dmh/forensic/pilot_survey.html

Schnittiker, J., Massoglia, M., & Uggen, C. (2012). Out and down: Incarceration and psychiatric disorders. *Journal of Health and Social Behavior*, *53*, 448–464.

Singer, J., & Willett, J. (1991). Modeling the days of our lives: Using survival analysis when designing and analyzing longitudinal studies of duration and the time of events. *Psychological Bulletin*, *110*, 268–290.

Steadman, H. J., Osher, F. C., Robbins, P. C., Case, B., & Samuels, S. (2009). Prevalence of serious mental illness among jail inmates. *Psychiatric Services*, *60*, 761–765.

Surrat, H. L., Inciardi, J. A., Kurtz, S. P., & Kelly, M. C. (2004). Sex work and drug use in subculture of violence. *Crime & Delinquency*, *50*, 43–59.

Sutton, J. E. (2010). A review of the life-events calendar method for criminological research. *Journal of Criminal Justice*, *38*, 1038–1044.

Sutton, J. E., Bellair, P. E., Kowalski, B. R., Light, R., & Hutcherson, D. (2011). Reliability and validity of prisoner self-reports gathered using the life event calendar method. *Journal of Quantitative Criminology*, *27*, 151–171.

Swanson, J. M. (1986). The formal qualitative interview for grounded theory. In W. C. Chenitz & J. M. Swanson (Eds.), *From practice to grounded theory: Qualitative research in nursing* (pp. 66–78). Menlo Park, CA: Addison-Wesley.

Tompsett, C., Domoff, S., & Toro, P. (2013). Peer substance use and homelessness predicting substance abuse from adolescence through early adulthood. *American Journal of Community Psychology*, *51*, 520–529.

Tripodi, S., & Pettus Davis, C. (2013). Histories of childhood victimization and subsequent mental health problems, substance use, and sexual victimization for a sample of incarcerated women in the U.S. *International Journal of Law and Psychiatry*, *36*, 30–40.

Trestman, R. L., Ford, J., Zhang, W., & Wiesbrock, V. (2007). Current and lifetime psychiatric illness among inmates not identified as acutely mentally ill at intake in Connecticut's jails. *Journal of the American Academy of Psychiatry and the Law*, *35*, 490–500.

Turner, H., Finkelhor, D., & Ormrod, R. (2006). The effect of lifetime victimization on the mental health of children and adolescents. *Social Science & Medicine*, *62*, 13–27.

Walsh, K., DiLillo, D., & Scalora, M. J. (2011). The cumulative impact of sexual revictimization on emotion regulation difficulties. An examination of female inmates. *Violence Against Women*, *17*, 1103–1118.

Widom, C. S. (2000). Childhood victimization and the derailment of girls and women to the criminal justice system. *Plenary Papers of the 1999 Conference on Criminal Justice Research and Evaluation—Enhancing Policy and Practice Through Research, 3*, 27–36.

Wiener, J. (2012). *Mentally ill inmates on the rise in California prisons and jails*. Retrieved from http://www.sacbee.com/2012/05/27/4519117/mentally-ill-inmates-on-the-rise.html

Wittchen, H. U. (1994). Reliability and validity studies of the WHO-Composite International Diagnostic Interview (CIDI): A critical review. *Journal of Psychiatric Research*, *28*, 57–84.

World Health Organization. (1990). *Composite international diagnostic interview*. Geneva, Switzerland: Author.