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RISK PROFILES OF WOMEN EXPERIENCING INITIAL AND REPEAT INCARCERATIONS: IMPLICATIONS FOR PREVENTION PROGRAMS

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Abstract

Incarcerated women experience myriad individual, interpersonal, and structural factors leading to arrest and rearrest. This study examined risk profiles of women experiencing initial and repeat incarcerations. The sample included 521 women recruited from two prisons in North Carolina and enrolled in a HIV/STD risk-reduction intervention trial. Variables included socio-demographics, structural/economic factors, sexual and substance use behaviors, STDs, victimization history, and depressive symptoms. Bivariate and multivariable analyses identified risk differences. Compared to women incarcerated for the first time, women with repeat incarcerations reported significantly greater economic instability, substance use and sexual risk behaviors, laboratory-confirmed STDs, and victimization during childhood and adulthood. Multivariable logistic regression found women with repeat incarcerations experienced greater unstable housing, injection drug use, crack cocaine use, concurrent sex partners, and childhood sexual victimization. Findings can inform the development of prevention programs by addressing economic instability, sexual risk, and substance use among women prisoners.

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Adult women are the fastest growing population in the criminal justice system in the United States (U.S.). According to data reported by the U.S. Bureau of Justice Statistics in 2013 (Carson, 2014), there were over 1.25 million women under the jurisdiction of a state or federal correctional authority (including probation, parole, jails, and prisons), and women under correctional supervision increased by 16.6% from 2000 to 2013 (Glaze & Kaeble, 2014). Most women are not incarcerated for violent crimes, and over half serve time in state and federal prisons for drug-related offenses (Carson, 2014; Durose, Cooper, & Snyder, 2014; Motivans, 2015). Female prisoners have a higher rate of being sentenced for drug-related crimes than do males (Leukefeld et al., 2009).

Many women prisoners are at risk for reoffending and subsequent incarceration after their release from prison (Petersilia, 2003). An analysis of recidivism among prisoners released in 30 states from 2005 to 2010 found 58.5% of female inmates were rearrested for at least one new crime within 3 years, and 68.1% were rearrested within 5 years (Durose et al., 2014). High rates of rearrest among women may be due to myriad individual, interpersonal, structural, and economic factors that pose challenges at every stage of the criminal justice process: arrest, adjudication, incarceration, and community reentry and reintegration (American Jail Association, 2014). Research suggests risk factors for recidivism and rearrest among women prisoners include involvement with illegal substances (American Jail Association, 2014; Walters, 2015), mental health problems (Baillargeon, Binswanger, Penn, Williams, & Murray, 2009; Visher & Bakken, 2014), exposure to intimate partner violence and other forms of victimization (Kuo et al., 2014; Lynch & Logan, 2015), lack of adequate social supports during reentry post-incarceration (Petersilia, 2003), experiences of poverty and homelessness (Lutze, Rosky, & Hamilton, 2014; Salem, Nyamathi, Idemundia, Slaughter, & Ames, 2013), limited employment and education (Freudenberg, Daniels, Crum, Perkins, & Richie, 2005), and engagement in sex work and other risky sexual behaviors (Davey-Rothwell, Villarroel, Grieb, & Latkin, 2012). Combinations of these risk factors play a role in women reengaging in criminal behavior post-release. A study of 624 substance-using women released from county jails indicated age, no custody of children, substance use frequency, and number of substance use problems predicted recidivism over 3 years (Scott, Grella, Dennis, & Funk, 2014).

Women entering correctional facilities experience high rates of sexually transmitted diseases (STDs), including HIV, compared to their non-incarcerated counterparts (El-Bassel et al., 2016; Kouyoumdjian, Leto, John, Henein, & Bondy, 2012; Willers et al., 2008). According to STD surveillance data reported in 2011 for 33 U.S. states and Puerto Rico, the STD positivity rates of women entering adult corrections facilities were 1.8% for gonorrhea, 7.4% for chlamydia, and 3% for syphilis (Centers for Disease Control and Prevention [CDC], 2012a). STD positivity rates reported in 2011 were lower among U.S. women tested in prenatal and family planning clinics (CDC, 2012b). With regard to HIV, 1.9% of female inmates were HIV positive or had a confirmed AIDS diagnosis; this rate remained stable from 2008 to 2010 (Maruschak, 2012). The rate of HIV among incarcerated women is 13 times as high as the CDC’s estimated prevalence rate of 0.15% for adolescent and adult women in the U.S. (CDC, 2012a).

Studies suggest incarcerated women experience numerous risk factors for acquiring HIV and other STDs (Fogel & Belyea, 1999). Many of the known HIV/STD risk factors mirror those related to initial incarceration and re-incarceration such as substance use and abuse, including injection drug use (Mumola & Karberg, 2006; Stein, Caviness, & Anderson, 2012; Strathdee et al., 2015), lack of adequate social support networks (Butler, Kowalkowski, Jones, & Raphael, 2012; Davey-Rothwell et al., 2012; German & Latkin, 2012; Grosso, 2010; Nargiso, Kuo, Zlotnick, & Johnson, 2014; Thomas, Levandowski, Isler, Torrone, & Wilson, 2007), increased number of sex partners and having concurrent sex partners (Davey-Rothwell et al., 2012; Neblett, Davey-Rothwell, Chander, & Latkin, 2011; Willers et al., 2008), history of interpersonal violence and childhood abuse (Gilbert et al., 2016; Johnson et al., 2015; Kuo et al., 2014), exchanging sex for drugs or money (Fogel & Belyea, 1999; Willers et al., 2008), mental health problems, including depression (Nowotny, Belknap, Lynch, & DeHart, 2014), and homelessness or economic instability (Grosso, 2010; Salem et al., 2013). A study examining correlates of HIV-related risk behaviors and incarceration status in a sample of male inmates identified age as the only variable to significantly differentiate between first-time and repeat offenders (Stephens & Braithwaite, 2007).

Although incarcerated women are at elevated risk for engaging in sexual risk behaviors and experiencing challenging life circumstances, only a few risk-reduction interventions have been developed for this population (Underhill, Dumont, & Operario, 2014). An evidence-based HIV prevention intervention, the Women's CoOp, was adapted for implementation in prison with women having a history of interpersonal violence victimization (Johnson et al., 2015). While the intervention was not rigorously evaluated in a randomized trial, women reported significant pre-post reductions in condomless sex, posttraumatic stress disorder symptoms, and depressive symptoms. Knudsen and colleagues tested the efficacy of a sexual risk-reduction intervention delivered to incarcerated women in four U.S. states; intervention participants reported fewer unprotected sexual behaviors than control participants 90 days post-release (Knudsen, Staton-Tindall, Oser, Havens, & Leukefeld, 2014). El-Bassel and colleagues evaluated the efficacy of a group-based multimedia HIV/STD prevention intervention (Women on the Road to Health; WORTH) among drug-involved women under community supervision (El-Bassel et al., 2014); women randomized to two intervention arms (traditional and multimedia WORTH) reported significant increases in protected sex acts and decreases in number of unprotected sex acts over a 12-month post-intervention period compared to women randomized to a wellness control intervention.

Fogel and colleagues adapted and tested the efficacy of an evidence-based STD/HIV prevention intervention (Providing Opportunities for Women's Empowerment, Risk-Reduction and Relationships; POWER) for incarcerated women in a randomized trial (Fasula et al., 2013; Fogel et al., 2015). Compared to women receiving standard-of-care services while in prison, those participating in the eight-session POWER intervention significantly reduced the number of male sex partners reported 3 months post-release, reduced vaginal intercourse acts without a condom outside a monogamous relationship at 6 months post-release, and increased condom use with a main male partner at 6 months post-release (Fogel et al., 2015). Contrary to expectations, POWER was not associated with significant reductions in incident laboratory-confirmed STDs (gonorrhea and chlamydia) across the study period. Fogel and colleagues speculated limitations in study methods

may have precluded intervention effects in preventing incident STDs post-release, but it is possible different risk experiences may have also played a role.

The purpose of this article is to determine how the lived experiences of women play a role in repeat incarcerations. Socio-demographic characteristics, structural and economic factors, HIV/STD risk practices, depressive symptoms, and experiences of victimization were examined in a vulnerable population of women prisoners. Based on prior studies (Scott et al., 2014), we hypothesize women incarcerated two or more times would have a more extreme risk profile than women incarcerated for the first time. In particular, multiple incarcerations would be associated with greater economic adversity, elevated substance use and sexual risk behaviors, greater rates of STDs, elevated levels of depressive symptoms, and prior reports of sexual abuse and victimization. These findings can be used to inform the development or adaptation of existing HIV/STD prevention programs.

METHOD

Women were recruited from two prisons in North Carolina from September 2010 to November 2011: North Carolina Correctional Institute for Women (NCCIW) in Raleigh and Fountain Correctional Center for Women (FCCW) in Rocky Mount. NCCIW is the state's primary processing facility and largest women's prison, housing more than 1100 inmates. All female inmates enter NCCIW at intake and are tested for STDs, including HIV. FCCW, which closed in 2014, was a minimum security prison housing more than 500 female inmates. Specific details regarding study methods are reported elsewhere (Fogel et al., 2015). The study protocol was approved by the institutional review boards of the University of North Carolina at Chapel Hill, the North Carolina Department of Corrections, and the CDC.

PARTICIPANTS

Women were eligible to participate in the trial if they were 18 years or older, HIV-negative, fluent in English, able to provide verbal and written consent, having had or expected to have sex with a male (i.e., sexually active), planned on remaining in North Carolina for the duration of the study, and had less than 6 months to serve on their current sentence. A total of 521 incarcerated women were enrolled in the study and participated in the baseline interview survey. Each interview consisted of questions read aloud with the aid of audio computer-assisted self-interviewing software for participants with low literacy. North Carolina Department of Corrections (NCDOC) regulations prohibited provision of money or other tangible items to incarcerated persons. Participants were mailed a cosmetic case containing condoms, lubricant, and body lotion after their release from prison.

MEASURES

The incarceration outcome measure was based on a single question: "Is this the first time you have been in prison?" Women who responded "yes" were considered first-time incarcerated. Responses of "no," indicating two or more times (including the current incarceration), were considered repeat incarcerated. All responses were verified using the NCDOC database.

All self-reported variables were assessed on the baseline interview survey. Socio-demographics included age, Latina ethnicity, race, education (high school graduate vs. greater than high school), marital status (marital groups vs. never married), number of births, number of children in household, and whether current incarceration is drug related. Structural and economic variables included income (< $18,000 per year vs. ≥ $18,000 per year, corresponding to the 2011 U.S. poverty level) (Department of Health and Human Services, 2012), number of people supported by income, receipt of government assistance (e.g., welfare or food stamps), unstable housing status (homeless or residentially transient vs. stable housing), and employment status (unemployed vs. working) prior to incarceration.

Risk behaviors included assessment of substance use and sexual behaviors during the 30 days prior to incarceration. Substance use variables included alcohol use; use of crack cocaine, powder cocaine, or speedball (heroin and cocaine mixture); and ever injecting drugs. Sexual risk behaviors included unprotected (condomless) vaginal intercourse outside of a monogamous relationship, condom use during vaginal intercourse with main and non-main male partners, partner concurrency (two or more male partners at same time), ever traded sex (of those who ever traded sex for money or drugs, traded sex for drugs only, and number of times traded sex), used drugs before sex, number of male sex partners, and whether main partner had 50% chance of having other male or female partner(s).

Nonviral STDs (chlamydia and gonorrhea) were assessed based on self-report and laboratory-confirmed testing. STD testing for chlamydia and gonorrhea was performed in the prison and was based on nucleic acid amplification testing from self-collected vaginal swabs at intake. All women were informed of their test results, and those with a reactive STD test were referred for treatment.

Victimization history included experiences of violence during childhood and as an adult. Childhood victimization was determined by questions from an 18-item Adverse Childhood Experiences (ACE) Scale (Felitti et al., 1998). Items were combined to create a childhood emotional abuse scale (e.g., any experience of parent or other adult swearing at you, insulting you, or putting you down), and a childhood sexual abuse scale (e.g., any experience of parent or other adult touching or fondling you in a sexual way; having you touch their body in a sexual way; attempting oral, anal, or vaginal sex with you; and actually having oral, anal, or vaginal sex with you). For adulthood victimization, any sexual victimization included experiences of physical and sexual violence (i.e., weapons used against you, forcefully held down, forced to have sex without protection against STDs, knowingly hurt physically during sex, afraid to say no to sex, had sex with you when didn’t know what was happening, made you have sex when you didn’t want it, and rape).

Depressive symptomatology was measured using the 20-item Center for Epidemiological Studies-Depression (CES-D) scale (Radloff, 1997). Responses were summed, and a cut-off of 16 was used to indicate clinically significant depressive symptoms. Women with a total score greater than 33 were referred to mental health counseling services in the prison.

DATA ANALYSIS

Bivariate analyses comparing initial and repeat incarcerated women used Pearson chi-square tests for dichotomous outcomes and *t*-tests for continuous outcomes. A multivariable logistic regression analysis examined the adjusted odds of incarceration status (initial vs. repeat). Socio-demographics, structural and economic factors, substance use and sexual risk behaviors, and victimization variables were included in the model as potential risk factors. As these are exploratory analyses, the final model was derived using backward selection of variables and *p*-values < 0.01. Adjusted odds ratios (AOR) and 95% confidence intervals (95% CI) were computed. All statistical analyses were based on two-sided tests with a significance level of 0.05, and conducted using IBM SPSS Statistics 21.0.

RESULTS

The study sample included 196 women with an initial incarceration and 325 women with two or more (repeat) incarcerations. Table 1 displays differences in socio-demographics, structural and economic factors, risk behaviors, STDs, depressive symptoms, and victimization experiences of the two groups of women. Relative to women incarcerated for the first time, those reporting repeat incarcerations were significantly older, had fewer children in their household prior to their incarceration, and were currently incarcerated on a drug-related offense (*p*s < 0.01). There were no significant group differences in terms of Latina ethnicity, race (White vs. non-White), education (high school graduate and higher vs. less than high school), marital status (never married vs. married/separated/divorced/widowed), number of births, or depressive symptoms. It is important to note that over 80% of the women in both groups had exceptionally elevated CES-D scores, indicating clinically significant depressive symptomatology. A significantly greater percentage of women with repeat incarcerations reported an income of less than $18,000 per year, living in unstable housing (including being homeless, living in a shelter, public housing, and no particular location vs. owned or rented house or apartment), and unemployment (*p*s < 0.01). In addition, women with repeat incarcerations supported fewer people with their income ($p = 0.001$). There were no significant group differences in receipt of government assistance.

In terms of HIV/STD-related risk behaviors, women with repeat incarcerations reported engaging in greater substance use and sexual risk behaviors. As shown in Table 1, statistically significant group differences in substance use include use of crack cocaine ($p < 0.001$), powder cocaine ($p < 0.001$), and speedball ($p = 0.042$), and ever injecting drugs ($p = 0.001$). In terms of sexual behaviors, women with repeat incarcerations reported significantly greater partner concurrency ($p < 0.001$), ever trading sex ($p < 0.001$), trading sex for drugs ($p < 0.001$), number of times trading sex ($p = 0.28$), use of drugs before sexual intercourse ($p = 0.032$), number of male sex partners ($p = 0.024$), and more than a 50% chance their main sex partner had other partners ($p = 0.016$). Women incarcerated the first time reported significantly greater condom use during vaginal sex with non-main male partners than repeat incarceration women ($p = 0.025$). Nearly three-quarters of all women in the study self-reported ever having an STD.

Upon examination of victimization experiences (Table 1), it was found that women with repeat incarcerations reported significantly greater childhood sexual abuse than initially

incarcerated women ($p = 0.034$); there were no group differences in childhood emotional abuse and abuse from one's mother. Women with repeat incarcerations reported significantly greater percentages of violence and victimization on nearly all of the abuse subscales. Compared to women incarcerated for the first time, those with repeat incarcerations reported significantly greater levels of having a weapon used against them (40.3% vs. 26.5%; $p = 0.001$); being forcefully held down, punched, kicked, or choked (58.5% vs. 43.9%; $p = 0.001$); being raped (29.6% vs. 14.8%; $p < 0.001$); and any experience of sexual violence victimization (70.5% vs. 58.5%; $p = 0.005$).

Results of the multivariable logistic regression model revealed several significant independent predictors of incarceration status (Table 2). Compared to women incarcerated for the first time, those reporting repeat incarcerations were significantly older (AOR = 1.03; 95% CI [1.01, 1.06]; $p = 0.003$), more likely to have lived in unstable housing prior to incarceration (AOR = 1.94; 95% CI [1.02, 3.67]; $p = 0.042$), more likely to have ever injected drugs (AOR = 1.78; 95% CI [1.10, 2.91]; $p = 0.02$), more likely to have used crack cocaine during the 30 days prior to incarceration (AOR = 2.98; 95% CI [1.74, 5.10]; $p < 0.001$), and more likely to have had concurrent sex partners (AOR = 1.85; 95% CI [1.02, 3.35]; $p = 0.044$). There was a trend for repeat incarcerated women to report greater childhood sexual victimization (AOR = 1.41; 95% CI [.94, 2.11]; $p = 0.099$).

DISCUSSION

This study examined differences in risk profiles of women with initial and repeat incarcerations to identify viable treatment targets with potential to enhance quality of life post-release. The profiles of these groups are consistent with prior studies associating individual, interpersonal, and structural factors with incarceration history (American Jail Association, 2014; Fogel & Belyea, 1999; Scott et al., 2014). The independent risk factors for women experiencing repeat incarcerations include older age; unstable housing; substance use, including injection drug and crack cocaine use; concurrent sex partners; and childhood sexual victimization. These findings can be used to inform the development and evaluation of prevention/rehabilitation programs that address these issues and inform prospective studies that can establish salient risk factors predicting reoffending among women.

The findings identify several important differences that have implications for the development of prevention programs. The majority of women prisoners recruited into the POWER trial experienced structural and economic difficulties prior to their incarceration. Many women reported living below the poverty level, receiving some form of government assistance, and supporting two to three people, on average, with their income. Nearly half the women reported being unemployed prior to incarceration. Based on the literature, the criminal justice system can support the economic stability of women during discharge planning by referring them to job training and housing assistance to ease community reentry (Luther, Reichert, Holloway, Roth, & Aalsma, 2011; Lutze et al., 2014; Salem et al., 2013). As discharge plans often change based on the complexities of reentry, it is important for women to have a support system post-release. In addition to helping women meet basic needs, this approach can help women reduce the likelihood of reengaging in risky behaviors (Luther et al., 2011).

Consistent with prior research, women with repeat incarcerations were more likely to be serving time for a nonviolent drug-related offense and engaging in illicit drug use, including injection drugs and crack cocaine (Mumola & Karberg, 2006). For the women enrolled in the Project POWER trial, few received substance abuse treatment services before entering prison and at post-release (Fogel et al., 2014). In addition, many women released from prison have to care for their children, and placement in an inpatient program may be a challenge. Prisons are encouraged to continue screening women at intake for illicit substance use, offer treatment services during incarceration, and refer women with a substance use and/or dependence problem to needed services at time of release (Strathdee et al., 2015; Viglione, Rudes, & Taxman, 2015). It is a national correctional standard to screen for mental health problems at intake (National Institute of Justice, 2007). Based on the extremely high prevalence of clinically significant depressive symptomatology in this sample, screening and treatment for mental health problems should occur during incarceration and after release.

Future studies are encouraged to investigate whether targeting prevention efforts on substance use or offering effective mental health services leads to actual reductions in reincarceration over time (Felitti et al., 1998). The provision of post-release drug treatment, if warranted, may also lead to reductions in illegal drug–related activities and behaviors associated with sexual risk. HIV/STD prevention programs delivered to women while in prison, including the POWER intervention, should focus on reducing partner concurrency, increasing health protective behaviors (i.e., condom use during sex), reducing trading sex and drug use during sex, and treating depressive symptoms (Fogel et al., 2014). However, high turnover and short release timing make it challenging for programs to take place while women are incarcerated. Therefore, effective reentry and post-release transitional programs for women may be key to improving their overall well-being (El-Bassel et al., 2014). Results from this analysis can be used to shape future research by highlighting key differences in the risk profiles for first-time and repeat incarcerated women.

Although not statistically significant in multivariate analysis, bivariate findings suggest experiences of childhood sexual victimization, including being touched or having sex with an adult while under the age of 18, and other forms of adult sexual victimization were greater among women with repeat incarcerations. This finding is consistent with prior studies linking the role of childhood victimization and sexual abuse to engaging in risk behaviors and arrest (Fogel & Belyea, 1999). Prevention programs for women prisoners need to address how victimization and abuse can impact these women’s lives and treat mental health problems (Gilbert et al., 2016; Johnson et al., 2015; Khan et al., 2011). The POWER intervention includes session content identifying intimate partner violence, sex work, and substance use as triggers for HIV/STD risk behaviors and barriers to safer sex that may be beneficial to these women (Fasula et al., 2013). Consistent with the findings of this study, the session content should be enhanced for women experiencing multiple incarcerations. Moreover, by targeting economic instability and drug use commonly experienced by women prisoners, lower rates of STDs may result without having to predominantly focus on sexual risk reduction (e.g., partner concurrency may be linked to economic uncertainty and engaging in trading sex). Our analysis suggests women with an initial incarceration are less likely to be at risk for these same behaviors and may not benefit

from the same prevention programs. However, every repeat incarceration begins with a first time, and these women are in need of preventive services.

Despite the implications of these analyses, it is important to address limitations. The findings reported here are based on cross-sectional data collected in two women's prisons in one state, and cannot imply causality or generalizability. Women who participated in the POWER trial may differ from those who declined participation, and the findings may not generalize to the larger population of women prisoners. Incarcerated women in a southern rural state may differ from their counterparts in other U.S. jurisdictions. These findings may not apply to women held in jails and female adolescents in juvenile detention facilities. Jails are typically operated by local governments and house a transitory population awaiting trial or serving short sentences (Staton-Tindall et al., 2015), and female adolescents in juvenile detention may experience a different risk trajectory (DiClemente et al., 2014). Future research can explore if the findings reported here generalize to other correctional populations and settings, and if the findings predict reoffending and multiple incarcerations longitudinally. Only depressive symptoms were assessed in the POWER baseline survey. It is important for future studies to include comprehensive measures of mental health, including trauma symptomatology and clinically diagnosed depression, to more fully describe the context of risk in this population (Visher & Bakken, 2014). Finally, characteristic to interviews and surveys, participants' answers to sensitive questions regarding risk behaviors and victimization may be influenced by social desirability bias. However, the study principal investigator and staff have substantial experience conducting research studies with women in prison (Fogel & Belyea, 1999), and rapport was established with all women recruited into the study.

CONCLUSION

The findings have implications for the public health and criminal justice systems by identifying different risk profiles of first-time and repeat incarcerated women. There is a need to proactively address economic stability, substance abuse, sexual risk, victimization, and depressive symptoms at the time of community reentry. In particular, the individual, interpersonal, and societal risk factors identified in this article can be used to inform prevention programs delivered by community-based organizations and health departments to reduce both HIV/STD-related risk behaviors and repeat incarcerations (Fogel et al., 2014). Integration of social and health services may help address co-occurring issues placing these women at risk. Further evaluation of interventions that address contextual factors, such as economic and social deprivation, poor educational opportunities, residential segregation, and inadequate health care, is needed (Adimora & Schoenbach, 2002; Lambert, Brown, Phillips, & Ialongo, 2004; Seth, Murray, Braxton, & DiClemente, 2013). Finally, enhanced screening of first-time and repeat incarcerations can triage women to appropriate risk-reduction programs, such as POWER, and counseling and treatment services. Continued research is essential to identify the most impactful programs for under-researched and vulnerable populations of incarcerated women.

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TABLE 1.

Sociodemographic, Structural, Behavioral, and Victimization Characteristics of Initial and Repeat Incarcerated Women, Project POWER, North Carolina, 2010–2011

Characteristic	Initial Incarceration (*N* = 196) Percent or *M* ± *SD*	Repeat Incarceration (*N* = 325) Percent or *M* ± *SD*	χ^2 or *t*-test (*p*)
Socio-demographics			
Age, years (mean ± *SD*)	31.85 ± 8.873	34.93 ± 9.245	3.74 (.000)
Latina ethnicity	2.0%	0.9%	1.15 (.283)
Race – White (vs. nonwhite)	57.7%	57.8%	0.002 (.966)
High school graduate (vs. < high school)	37.2%	41.2%	5.96 (.051)
Never married (vs. any marital status)	36.2%	36.3%	0.00 (.985)
Number of births (mean ± *SD*)	2.18 ± 1.407	2.42 ± 1.396	1.84 (.067)
Any children in household	71.4%	52.0%	19.12 (.000)
Current offense drug-related	30.1%	42.2%	7.57 (.006)
CES-D depressive symptoms (mean ± *SD*)	28.50 ± 14.09	27.07 ± 12.92	1.18 (.239)
CES-D depressive symptoms (> 16)	83.2%	80.0%	0.80 (.371)
Structural			
Income (< $18,000/year)	60.4%	71.0%	5.65 (.017)
Number of people supported by income (mean ± *SD*)	3.0 ± 1.589	2.5 ± 1.535	−3.34 (.001)
Receive government assistance	55.1%	59.7%	1.06 (.304)
Unstable housing	7.7%	18.5%	11.59 (.001)
Unemployed prior to incarceration	38.8%	51.9%	8.38 (.004)
Risk behaviors			
Alcohol use *	62.1%	68.3%	1.85 (.174)
Crack cocaine use *	11.2%	36.9%	40.73 (.000)
Powder cocaine use *	9.2%	20.9%	12.23 (.000)
Speedball use *	9.7%	16.0%	4.13 (.042)
Ever injected drugs	15.8%	28.0%	10.12 (.001)
Unprotected vaginal intercourse outside of monogamous relationship *	73.8%	73.4%	0.02 (.902)
Condom use during vaginal intercourse with main male partner *	31.4%	29.5%	0.17 (.676)
Condom use during vaginal intercourse with non-main male partner *	50.0%	23.3%	5.05 (.025)
Partner concurrency *	10.7%	25.0%	15.81 (.000)
Ever traded sex	5.1%	17.8%	17.23 (.000)
Traded sex for drugs	10.8%	36.3%	40.59 (.000)
Number of times traded sex (mean ± *SD*)	1.27 ± 10.672	4.32 ± 17.455	2.20 (.028)
Used drugs before sex *	37.6%	47.3%	4.62 (.032)
Number of unprotected vaginal sex acts (mean ± SD)	14.7 ± 18.173	13.89 ± 19.666	−0.47 (.64)
Number of male sexual partners (mean ± *SD*)	1.31 ± 3.242	3.49 ± 13.196	2.27 (.024)
50% chance or greater main partner had other partners *	18.4%	27.7%	5.81 (.016)

Characteristic	Initial Incarceration (*N* = 196) Percent or *M* ± *SD*	Repeat Incarceration (*N* = 325) Percent or *M* ± *SD*	χ^2 or *t*-test (*p*)
Sexually transmitted diseases (STD)			
Ever self-reported STD	71.5%	83.3%	9.97 (.002)
Laboratory-confirmed STD (chlamydia or gonorrhea)	4.7%	5.5%	0.124 (.725)
Victimization history			
Childhood emotional abuse	44.9%	47.8%	0.42 (.517)
Childhood sexual abuse	31.1%	40.4%	4.48 (.034)
Childhood abuse from mother	36.2%	38.5%	0.27 (.603)
Weapon used against **	26.5%	40.3%	10.18 (.001)
Forcefully held down, punched, kicked, or choked **	43.9%	58.5%	10.44 (.001)
Made to have sex without protection **	7.7%	13.8%	4.60 (.032)
Physically hurt during sex **	9.7%	17.8%	6.45 (.011)
Afraid to say no to sex **	11.2%	15.7%	2.03 (.155)
Had sex when not in control **	14.9%	23.8%	5.88 (.015)
Had sex when didn't want to **	20.9%	29.5%	4.69 (.030)
Raped **	14.8%	29.6%	14.72 (.000)
Any sexual victimization **	58.5%	70.5%	7.82 (.005)

Note.

* Recall period 30 days prior to incarceration.

** Incident occurred since the age of 18.

TABLE 2.

Results of Multivariable Logistic Regression Comparing Initial and Repeat Incarcerated Women on Socio-demographic, Structural, Behavioral, and Victimization Variables, Project POWER, North Carolina, 2010–2011

Variable	AOR [95% CI]	*p*
Age, years	1.03 [1.01, 1.06]	.003
Housing		
Stable	Reference	
Unstable	1.94 [1.02, 3.67]	.042
Ever injected drugs		
No	Reference	
Yes	1.78 [1.10, 2.91]	.020
Crack use (past 30 days)		
No	Reference	
Yes	2.98 [1.74, 5.10]	.000
Partner concurrency		
No	Reference	
Yes	1.85 [1.02, 3.35]	.044
Childhood sexual victimization		
No	Reference	
Yes	1.41 [0.94, 2.11]	.099

AOR = adjusted odds ratio; CI = confidence interval. AORs > 1.00 indicate a greater likelihood of an outcome among 325 repeat incarcerated women compared to 196 initial incarcerated women.