Prison Program Utilization and Recidivism among Female Inmates in New Mexico

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Acknowledgements

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Section 1: Introduction and background

Successful reintegration into the community after prison is of great import for both offenders and the public as nearly all prisoners will eventually return to the community. Current estimates indicate that the number of individuals incarcerated nationally in 2013 was 1,574,700, up slightly from 2012 (Glaze and Kaeble, 2014). While females consistently comprised approximately 7% of the total number of individuals incarcerated in state facilities nationally between 2000 and 2013, the rate at which the population of females in state custody grew exceeded that of males (21% between 2000 and 2010 versus 15% of males during the same time period) (ibid). Unfortunately, the majority of former prisoners recidivate. Among a national sample of prisoners released in 2005, over two-thirds were re-arrested within three years of release and nearly 77% were re-arrested within five years; recidivism was highest for property offenders (Durose, Cooper, and Snyder, 2014). While females were re-arrested at lower rates than males, 68% of females were re-arrested five years post-release (ibid).

New Mexico has consistently experienced an increase in its female prison population over the past several years. In 2011, the female prison population exceeded the prison capacity, forcing the women to temporarily use a segregated pod at the nearby men's prison. Since fiscal year 2010, the women's prison population jumped by nearly 14% (NMSC, 2014). In response, the New Mexico Women's Correctional Facility (NMWCF) increased its bed capacity to 744 to accommodate the additional inmates.

This is not the first time, though, that New Mexico experienced such increases in its female population. Indeed, in response to a burgeoning population, in 2003 the NMCD initiated a gender-responsive model aimed at promoting successful female reentry through appropriate programming (Carr, 2007). Prison programming is important for inmates. Many enter prison with deficiencies in their education, job histories, and in other aspects of their personal lives. Indeed, appropriate in-prison programming can help prisoners successfully reintegrate into society.

Effectiveness of in-prison programming

Common prison programs include education (academic), vocational training, substance abuse treatment, and pre-release programs. Many studies have examined the effectiveness of in-prison programming, particularly in terms of recidivism, though some also assess other relevant outcome measures such as employment and drug/alcohol relapse. While studies find some support for the relationship between program participation and positive outcomes, there is variation with some studies finding support and others that do not.

Certain types of in-prison programming may be more effective. For example, Wilson et al. (2000) conducted a meta-analysis of educational, vocational, and work programs. They concluded that education programs were associated with lower re-offense rates than vocational programs, though they did not claim any causality between program participation and recidivism. Mackenzie (2012) echoes

these findings; she further asserts that programs that focus on individual-level change are more effective at reducing recidivism than those that do not.

Further, the same type of program may have different results depending on the program components. A number of studies have focused on the effectiveness of substance abuse programming, especially Therapeutic Communities (TC). In their meta-analysis of 24 studies conducted between 1988 and 2008, Tripodi, Bledsoe, Kim, and Bender (2011) report that women who participated in substance abuse programming while incarcerated were 45% less likely to reoffend than women who did not participate in substance abuse programming; they found that TC is especially effective. However, this may depend on whether there is follow up after prison. For example, in their review of prison drug treatment programs, Belenko, Houser, and Welsh (2012) report that rates of recidivism among individuals who received both in-prison treatment and post-release treatment were lower than both individuals who received treatment in prison only and a comparison group who received no treatment. Recidivism rates among the prison-only treatment group and the no treatment group were similar.

Program fidelity and regular access also influence the effectiveness of programs. The extent to which each of the programs is implemented with fidelity within the New Mexico Women's Correctional Facility (NMWCF) is unknown, though studies suggest that this may be a problem (Legislative Finance Committee, 2012; Willits, Albright, Broidy, and Lyons, 2009). In addition, inmates must be able to access programs consistently. In-prison programming can be disrupted for a number of reasons. For example, inmates may not be able to access programs due to lock-downs. Additionally, women sometimes lose eligibility for a period of time or permanently due to disciplinary problems while incarcerated.

Factors related to the inmate may influence the effectiveness of programming. Individuals who are more motivated to change are likely to get more from prison programming, and in turn, be less likely to re-offend. The recidivism risk level and criminogenic needs of the incarcerated person may be linked to program success. Burke, Herman, Stroker, and Giguere (2010) indicate that programming is most effective when it targets individuals whose risk level is medium to high and the program meets their criminogenic needs. Offenders in the low-risk category are less likely to benefit from programming, and indeed, some studies suggest that programming could have an adverse effect on reentry among low-risk prisoners (in Wexler, Melnick, and Cao, 2004). This is reiterated in Serin's (2005) discussion of evidence-based practices in prison, in which he notes that in-prison programming should be limited for those inmates who are classified as low risk, and instead should be targeted to higher risk inmates who should also participate in aftercare. Further, best practices indicate the importance of matching programming to offenders' risks and needs as measured with a comprehensive validated risk needs instrument such as the COMPAS or LSI. In New Mexico, while there is a process in place to formally match risks, needs and programs through the Transition Accountability Plan, prior research indicates that offenders generally

do not access programs according to their needs (Denman et al., 2011), though staff members do recommend programs based on assessed needs as part of the intake process.[1]

Finally, study methodology may play a role in the results. The outcomes examined vary from study to study. Steurer and Smith (2003) examined recidivism rates among inmates participating in educational programming in three different states. They found recidivism was 3% to 12% lower for inmates who participated than for those who did not participate, depending on the state and outcome measure (i.e., re-arrest, re-conviction, or re-incarceration). Others (e.g., Belenko, Houser, and Welsh, 2012; Steurer and Smith, 2003; Wade, 2007) note the limitations inherent in using recidivism as the only outcome measure as well as methodological concerns (e.g., whether controls are included, length of follow-up period, and analysis technique chosen).

Thus, while prison programming appears to reduce recidivism, the extent of the measured reduction may vary based on a number of factors. These include the type of program assessed, degree of program fidelity, access to programming, and individual characteristics of inmates accessing programs. In addition, study methodology is an important concern.

Who participates in programs?

While most studies of prisoner programs focus on outcomes, a few have examined who accesses programs. These studies primarily examine the relationship between demographics, prison-related variables, and criminogenic needs with in-prison program participation. Age, gender, and race all may play a role in whether an inmate participates in treatment. For example, some studies found younger inmates more often participate in education and vocational programs (Chamberlain, 2012; Petersilia, 1979; Rose and Rose, 2014) while older inmates participate in substance abuse treatment (Petersilia, 1979). Some studies show that, relative to males, females are more likely to participate in prison programming (Belenko and Houser, 2012; Belenko et al., 2012; Rose and Rose, 2014). Chamberlain (2012), though, found males were slightly more likely to participate in treatment. However, she found this varied by cohort year. For example, among the 1991 cohort of prisoners who completed the Survey of Inmates in State Correctional Facilities, males more often participated in substance abuse treatment, education, and vocational programs; there was no statistically significant difference in program participation by gender among the 2004 cohort.

Likewise, while most studies find that race plays a role in program participation (Belenko and Houser, 2012; Chamberlain, 2012; Petersilia, 1979; Rose and Rose, 2014), others do not (Jackson and Innes, 2000). However, there is no clear pattern across those studies that find race to be a significant predictor of program participation. For example, Petersilia (1979) found that whites are more likely to participate

[1] The Transition Accountability Plan (TAP) is a comprehensive case management system that matches prisoners with appropriate programming related to their criminogenic needs, and includes periodic reassessment. In 2011, the New Mexico Statistical Analysis Center completed a gaps analysis and found that staff reported that comprehensive case management as envisioned in the TAP was not occurring. Instead, prisoners were largely accessing programs for reasons unrelated to addressing their criminogenic needs.

in alcohol treatment while blacks are more likely to participate in drug treatment. Belenko and Houser (2012) found that males identified as an "other" race (non-Hispanic and not African American) were more likely to participate in drug treatment relative to whites, while Chamberlain (2012) found whites were more likely to participate in substance abuse programs. Further, Chamberlain (2012) found African Americans and Hispanics were more likely to participate in education programs relative to whites. Rose and Rose (2014) found the opposite: white prisoners were more likely to participate in education programs. This finding was significant, though, only for males. Thus, when considering which factors play a role in program engagement, it is important to include demographic variables, but it appears that how these are related to in-prison program participation may vary over time, place, and program type. Further, the importance of race (and perhaps other variables) may vary by gender.

Prison and criminal history related variables may also influence utilization of prison programming. Specifically, some studies indicate that a more significant criminal history, measured by prior arrests or incarcerations, is associated with greater program participation (Belenko and Houser, 2012; Chamberlain, 2012). However, not all studies find this relationship (see Petersilia, 1979 for an exception). Likewise, while most studies find time incarcerated and/or length of sentence are positively related to program participation (Chamberlain, 2012; Jackson and Innes, 2000; Petersilia,1979; Rose and Rose, 2014), not all do (Belenko and Houser, 2012).

Best practices suggest that inmates who have criminogenic needs should participate in programming related to those needs. Findings supporting this in practice are conflicting. Jackson and Innes (2000) found that inmates with employment and education needs are more likely to participate in education programs than other inmates; likewise, others have found that inmates with substance abuse needs were more likely to engage in drug and alcohol treatment programs than other inmates (Belenko and Houser, 2012; Chamberlain, 2012). Further, studies indicate that just a portion of those who have an identified need receive in-prison programming related to that need (Belenko et al., 2012; Belenko and Houser, 2012; Petersilia, 1979). Thus, while those who have criminogenic needs may be more likely to access appropriate programming, the data suggest that many who have those needs are not accessing relevant programming.

Prison programming among female offenders in New Mexico

The New Mexico Women's Correctional Facility (NMWCF), the only prison in the State dedicated only to female inmates, is a privately run prison in Grants, New Mexico. The New Mexico Corrections Department (NMCD), which oversees the NMWCF, has been working towards improving successful reentry among its prisoners for many years. As part of their commitment to reentry success, the NMWCF proactively implemented gender-sensitive programming in the 2008-2009 fiscal year. An array of programs is offered by the NMWCF. Current offerings include *academic programs* such as adult basic education (ABE) and college courses leading to an Associate's degree; *vocational/technical training*; *life skills* programs including pre-release reentry programs intended to help the offender reintegrate into society and reduce recidivism, and parenting programs; *substance abuse treatment* through both psychoeducational groups and Residential Drug Abuse Program (RDAP); and *mental health and cognitive*

programs, including those that address criminal thinking and behavior, as well as various psychoeducational groups such as those that address grief and loss, self-esteem, and women's empowerment.

Participation in programming is generally voluntary, though there are exceptions. For example, Adult Basic Education (ABE) is required for prisoners who are housed at Level III or higher and do not have a high school diploma or GED, and are mandated by the Inmate Literacy Program; other prisoners may access ABE voluntarily (NMCD, January 2013). Additionally, moral recognition therapy/domestic violence can be court mandated. Importantly, some programs offer an incentive of lump sum awards, allowing women to earn some amount of time off of their prison stays through successful participation in these programs. Other programs have no external reward beyond completion certificates. While there has been some work to assess the effectiveness of certain programs within NMCD, this has typically been limited to specific programs (e.g., Therapeutic Communities and Project SOAR) and involves tracking re-incarceration rates among program participants relative to the general population.

Study questions

It is important to determine whether participation in prison programming is effective. Two aspects of in-prison programming are of particular interest. First, although there is an effort to ensure that prisoners are accessing programming that it appropriate for them, programming provided within the NMCD including the NMWCF is not matched to offenders' risks and needs in a systematic way (Denman et al., 2011; Legislative Finance Committee, 2012). It is unclear, then, to what extent inmates access programs that reflect their risk levels and criminogenic needs. Thus, the first question we address is *what is the relationship between the characteristics of women inmates and their program utilization?* We explore which programs female inmates participate in, their completion rates, and which characteristics are associated with program utilization overall and by type of program. We focus especially on the relationship between identified criminogenic needs and measures of risk with program participation. Second, while there has been some assessment of recidivism for some programs offered within NMCD, this has been limited. Thus, the next question we address is *what is the relationship between the types of in-prison programming and success post incarceration?* Using various measures of recidivism, we examine the recidivism rates of women who participate in programming as compared to those who do not. Further, we explore the characteristics associated with recidivism and assess whether program participation plays a significant role in deterring reoffending.

Methodology

Sample

This study is exploratory and includes women released from the NMWCF in 2009. There were 436 women released in 2009; we were able to obtain data for 426 of them (details are below). We chose to focus on the 2009 release cohort to ensure ample time to assess recidivism, which we tracked through December 2013. While there have been some changes in programming over time at the NMWCF, these have been minor, particularly among programs that offer lump sum awards/earned credit. Overall,

then, programming available in 2009 is similar to programming being offered currently. One important exception is that the Recidivism Reduction program is not offered currently according to NMCD staff.

Procedures

We obtained automated administrative records data from several sources including the New Mexico Corrections Department (NMCD), the New Mexico Department of Public Safety (DPS), and the Administrative Office of the Courts (AOC). In addition, we gathered data from hard-copy prison records located at the NMWCF in Grants, New Mexico. We began data collection at the prison on April 17, 2014 and completed it on July 11, 2014. There were 436 women released from prison in 2009; we were able to obtain the records for all but 10 of them. We entered the hard-copy data into Excel at the NMWCF and then converted it to SPSS for analysis. Data from all sources were merged using common identifiers. We joined NMCD data with other NMCD data using offender number, which is a unique number assigned to each individual. We joined the remaining datasets with common identifiers (last, first, and middle name; date of birth; and/or last four digits of the Social Security number). This was completed in iterations with decreasing criteria. For example, the first match included all identifiers, the second match omitted middle name, etc. We manually checked the results of those cases that did not match perfectly using the strictest criteria to determine whether the match was a good one. Any cases that we were unsure about and could not be verified were not considered a good match and were discarded.

Automated data from the NMCD include all admissions to and releases from prison between 2004 and 2013, as well as community risk and needs assessments. Data consist of demographics (age, sex, and race); dates (admission and release); and institutional data including classification level at intake, supervision level at release, current offense type (most serious offense), admission type (such as new admission, revocation, etc.), and release type (whether released to probation, parole, both or neither). Risk and needs assessment (RNA) data include all assessments administered to offenders under community supervision. The RNA is comprised of both static and dynamic risk factors measuring community risk.

We collected data regarding needs, initial classification level (reflecting institutional risk), and program participation from the NMWCF hard-copy records. We gathered the scores for each needs assessment area (substance abuse, physical health, occupational skills, educational, and life skills), initial classification level (when populated), and recommended programming from the needs assessment form or other sources in the file (e.g., notes on chrono form or other forms). We were able to find evidence of participation in programming on various forms in the file (e.g., the good time figuring sheet, completion certificates, a monthly reporting form). In a handful of instances, we discovered that women participated in programs through their expositions written for the Reentry Recidivism Reduction Program. We determined the amount of credit earned for program participation from the good time figuring sheet. We found that programs associated with earned credit and to some degree, those programs that include some sort of certificate of completion, were most consistently documented in the records. Documentation of women's participation in other types of programs (e.g., P.S. I Love You, Grief and Loss) was not consistent, and found by reading the documents associated with the Reentry

Recidivism Reduction Program. Otherwise, there was seldom documentation of these programs. Therefore, we believe the true extent of participation in programs not associated with earned credit is underreported here.

The remaining sources of automated data used are statewide arrest data from DPS and court data from AOC. DPS data include all individuals arrested between 2001 through 2013 and represent all hard-copy and electronically submitted arrest fingerprint cards in New Mexico. Data elements consist of personal identifiers, demographics, offense type, arresting agency, and date of arrest. Data from the AOC include all district court cases disposed of between 2000 and 2013. Each line of data includes offender personal identifiers, most serious offense (MSO) charge, court case number, and disposition of MSO. In cases where the where the MSO did not result in a conviction, we checked the case status overall on the New Mexico Courts Case Lookup website (https://caselookup.nmcourts.gov/caselookup/app) to determine whether any of the charges resulted in a conviction and entered that into the automated data.

Data elements/measures

We included several pieces of data to explore program utilization and effectiveness. First, we gathered data regarding *program participation* during incarceration. We documented which programs inmates participated in, whether they completed the program, whether they earned any lump sum awards, and if so, how much. While we also gathered the dates they began and completed the program so we could examine dosage, these data were often missing and ultimately unsuitable for analysis. Inmates participated in a variety of programs. We combined these into five categories: substance abuse, vocational, educational, life skills, mental health/cognitive.[2] Life skills programming is almost entirely comprised of the NMWCF's Recidivism Reduction Program; a handful of women also participated in a parenting program. While NMWCF also offers health programming, we did not include this in the analysis because there were so few women whose records included documentation of participation in health programs. Program participation and completion were coded as "1" if there was an indication in the files that the inmate participated in the program and "0" if there was not.

A classification officer at the prison should administer a *needs assessment* to each offender when she enters prison and periodically thereafter. We chose the needs assessment which was both most complete and closest to the admission date. The needs data indicates the extent of problems in the following areas on a 0 (no current problem) to 5 (extreme problem) scale: substance abuse, physical health, occupational skills, educational skills, and life skills. In some cases, the needs assessment indicated that there were problems in one or more areas (1 or higher), but other areas were left blank. In those instances, we recoded the missing data to "0" as no problem was noted. We found needs assessments for 413 of the women in the sample; the needs were scored for 400 of those. We expect

[2] On their website, the NMWCF describes the various programs they offer to women including life skills, which they describe as including parenting and pre-release. Thus, we defined life skills in the same manner. Included in the mental health/cognitive category are those programs that focus on improving an inmates' emotional well-being or promote cognitive-behavioral change.

that women with higher needs would be more likely to participate in programming related to their needs.

The *initial classification level* reflects the results from NMCD's Initial Custody Scoring Form or Reclassification Scoring Form. This form reflects institutional risk rather than community risk and varies from a low of I to a high of IV. It is used to determine custody level and housing status (CD-080102). The initial classification level was available in the automated admissions data and was recorded on the hard-copy needs assessment. We used the data from the hard-copy records first (335 records), and supplemented with the automated data if missing from hard-copy records. We were able to find data for 397 of the women. We expect that women at higher institutional levels of risk may have less access to programming and therefore, less participation.

We expect that whether a program was recommended by prison staff may influence program participation. Thus, from hard-copy prison records we gathered *recommendations* for programming. This was noted in various places in the hard-copy files including on the needs assessment, intake, and review forms. While staff could recommend participation in specific programs (e.g., AA/NA), they also made broad recommendations (e.g., substance abuse). Using recommendations from all sources in the file, we created multiple variables including the type of program recommended (physical health, life skills, vocational, education, substance abuse, and mental health/cognitive), whether any program was recommended, and the total number of programs recommended. Dichotomous variables were coded as "1" if the program was recommended and "0" if there was no evidence of a recommendation for programming in that category.

We gathered the *overall risk score* from the automated risk and needs dataset. Community supervision staff administers this instrument. It is intended to measure community risk/risk of re-offending and ranges from minimum (1) to extreme (4), although these scores can be overridden by probation/parole supervisors at which time a level of "extreme special programs" can be added. Typically, probation or parole officers administer this assessment when an offender begins a term of community supervision and periodically re-assesses risk. Most women had multiple RNAs in the dataset. We chose the RNA closest to release, administered either before the woman left the facility or soon thereafter. In some cases, we were not able to find an RNA related to the 2009 prison term. In those cases, we used the RNA closest to the current prison term; 21% of the RNAs were administered prior to the current incarceration and another 1% were administered more than three months after release.

To examine the second question, whether programming is related to reentry success, we focused on multiple *recidivism* measures: arrests, adjudications, convictions, incarcerations, and incarcerations for new offenses only. Arrests include both arrests for technical violations of terms of community supervision as well as new offenses. Subsequent adjudications include all felony court filings processed through district court. We examine both whether the case was adjudicated and whether it resulted in a conviction on one or more charges. Subsequent incarceration includes incarcerations for both new offenses only as well as violations of supervision conditions and new offenses. We also included a

measure that encompasses all these measures of recidivism that we call "any subsequent offenses." Data are dichotomous and coded as "1" if there was a subsequent offense and "0" if there was not.

Both utilization of programming and success after release from prison could be influenced by other factors including personal characteristics, prior criminal history and incarceration offense, and institutional factors. Thus, we include the following demographic variables: *age at intake*, self-reported *race/ethnicity* (coded as "1" for white and "0" for all others), and *marital status* ("1" for married and "0" for not married). We calculated the *length of time incarcerated* in days. We explored various measures of *prior criminal history*, including whether there were any prior arrests, adjudications or incarcerations, (coded as "1" if there was a prior event and "0" otherwise), as well as the *total prior offenses* (measured as the total number of unique prior incidents). We include *current incarceration offense*. Current incarceration offense represents the inmate's most serious offense as defined by the NMCD and is grouped into type (violent, property, drug, DWI, and other). Finally, when assessing subsequent offending, we include the inmate's *release type*. This variable indicates whether the inmate was released with any supervision ("1" for yes, "0" for no).

Analyses

We begin by describing the sample; this description is available in Section 2. In Section 3, we describe program participation including which programs women participate in and the characteristics of women who participate in these programs. We utilized multivariate logistic regression analyses to assess which factors were most strongly associated with program participation both overall and by program type (life skills, education, vocational, substance abuse, mental health/cognitive). We calculated a series of nested models to assess the relative impact of each set of independent variables on each of the dependent variables. We assessed the significance of the addition of each block of variables by calculating the difference between the model -2 Log Likelihoods. This results in a chi-square statistic; the degrees of freedom are equal to the number of variables added in each block. We include the odds ratios for each independent variable. The odds ratio can be interpreted as the multiplicative change in the odds of participating in a program. For example, if the odds ratio for an independent variable were 1.3, this would indicate that an increase of one-unit in this independent variable is expected to increase the odds of program participation by 30%. Similarly, an odds ratio of 0.7 would indicate that an increase of one-unit in that independent variable would decrease the odds of participation by 30%.

In Section 4, we examine recidivism. We analyzed the data using univariate and bivariate statistics as well as multivariate logistic regression. Because different independent variables may be associated with each of the different outcome measures (arrest, conviction, and re-incarceration), we completed a series of nested logistic models for each outcome as well as recidivism overall. We also examine recidivism by program type.

Section 2: Description of sample

Women in the 2009 release sample were not statistically different from women released from prison in the three years prior (2006-2008) or after (2010-2012) in terms of demographics, current intake reason, offense type, or originating court locale. A comparison of the release sample to women released in other years is available in Appendix A. We describe the sample population below.

Demographics

The average age of women at intake was 34 (s.d.=8.6), ranging from 19 to 63 years old. Most women (70%) were under the age of 35. The racial/ethnic composition included mostly Hispanic (58%) or White, non-Hispanic (28%) women. Just under half (46%) of the women had never been married at the time they began their prison stay, 22% were divorced, and 21% were either married or in a common law relationship.

Table 2.1. Demographics of women in sample

Age		Race/Ethnicity		Marital Status	
Under 21	3%	White	28%	Married/common law	20%
21-30	37%	Hispanic	58%	Separated	8%
31-40	36%	Native American	7%	Divorced	22%
41-50	21%	African American	6%	Widowed	2%
51 and over	3%	Other	1%	Never Married	46%
				Unknown/missing	1%
N	426	N	426	N	426

Current offense, intake type, and initial classification level

The most common offense (40%) was a drug offense; half were for drug trafficking and half were for possession. The next most common offense was a property offense: one-quarter of the women were serving time for either a Part I (burglary, larceny/theft, motor vehicle theft, or arson) or Part II (all other property offenses) property offense. Among those whose most serious offense was a property crime, the most common property crime was fraud (58%), followed by burglary (25%). Just under one-quarter (23%) of the women were serving time for a violent crime. Most of those were for a Part II violent crime rather than Part I (homicide, rape, robbery, and aggravated assault). Among those incarcerated for a violent crime, the most common offense was child abuse (43%), followed by battery (19%). The remainder of the women were incarcerated for DWI (7%) or some other charge (5%) (e.g., attempt to commit a felony, contributing to the delinquency of a minor, escape, or bringing contraband into a prison/jail).

Table 2.2. Current most serious offense

Offense type	
Violent	23%
Property	25%
Drugs	40%
DWI	7%
Other	5%
N	426

NMCD's admissions data includes an intake type that describes why an individual is admitted to prison. The most common intake type was a new admission (54%), which indicates that the offender was incarcerated for the first time on these charges (either a new conviction or a probation revocation). One-third of the women were serving time for a probation/parole violation. Women who return on a parole violation could be incarcerated as a sanction under the Sanctioned Parole Violator Program (SPVP) to serve a 30- to 90-day sentence; probationers and parolees could be revoked partially or fully. Partial revocation indicates that offenders are remanded to prison for a period of time, and then restart their community supervision upon release. Those who are revoked completely serve the remainder of their sentence in prison; they are released without any community supervision to follow. Just 13% of the women were listed as "return admission," which generally indicates the woman has been incarcerated previously, but is returning for a new offense. However, the use of this intake type is somewhat inconsistent. For example, some offenders who had been incarcerated previously were listed as a "new admission" rather than "return admission" and some women listed as "return admission" were actually returning to serve time for a probation/parole violation on an offense for which they had served time previously. Generally, though, "return admission" and "new admission" indicates that the offender was serving time on a charge they had not served time for previously, rather than returning to serve time for a violation. A very small percentage had an intake reason of "other." These included admissions for diagnostic assessment as well as compact holds and indicated a short-term stay.

Table 2.3. Admission reason

Intake Type	
New Admissions	54%
Parole/Probation Violations	33%
Return Admissions	13%
Other	<1%
N	426

Time incarcerated and release type

The average sentence length for women in this sample was just over four years (1495 days, s.d.=1172), ranging from 0 days to 4448 days. However, most women actually served one year or less in prison (see Table 2.4 below), with an average of 430 days (s.d.=478). Note, though, that this does not take into account the credits women earned prior to their prison incarceration and it is likely that women were

detained in a local facility for some period. The majority of women were released with some sort of community supervision to follow: 67% were released with a parole term, 4% with both parole and probation to follow, and 1% with probation to follow. Just over one-quarter (28%) were discharged without a supervision term to follow and 1% were released by court order, indicating the conviction or sentence was overturned.

Table 2.4. Time incarcerated and type of release

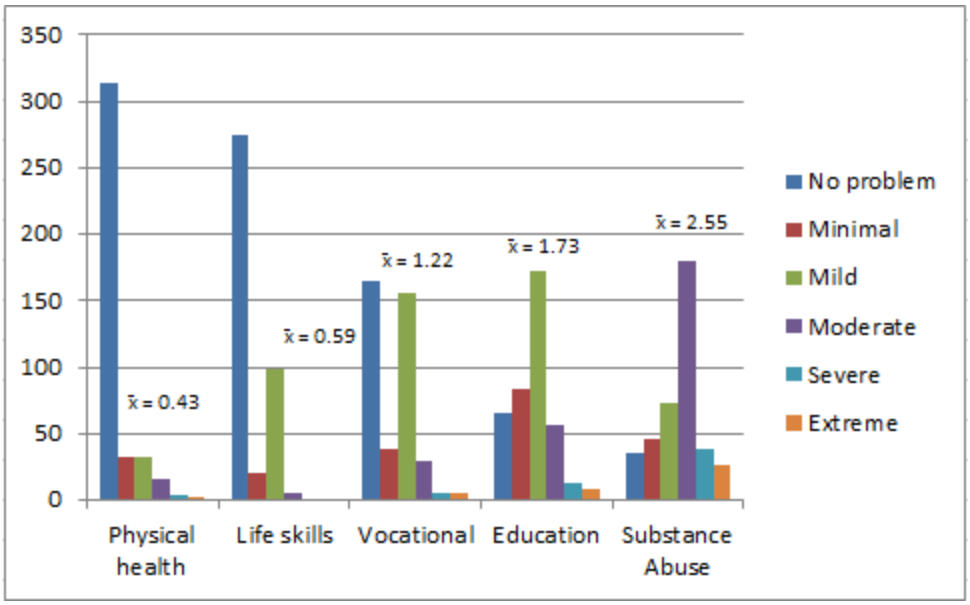
Length of time incarcerated		Release Type	
Up to 90 days	12%	Court Ordered	1%
91 to 180 days	18%	Discharged	28%
181 to 365 days	31%	Dual Supervision	4%
366 to 548 days	17%	Parole/Parole to Center	67%
549 days to 730 days	9%	Probation	1%
731 days to 5 years	11%		
More than five years	3%		
N	426	N	426

Criminogenic needs

At intake, prison staff assess each offender's criminogenic needs in five areas: physical health, life skills, vocational, education, and substance abuse, each ranging from 0 (no problem) to 5 (extreme).[3] A summary of the need scores is presented in Chart 2.1 below. Very few women had needs in the areas of physical health or life skills. Indeed, 74% were identified as having no physical health needs and 69% were identified as having no life skills needs. The average needs scores in these areas were 0.43 (s.d.=.93) and 0.59 (s.d.=.91), respectively. The average vocational and educational need scores were higher (average of 1.22 [s.d.=1.18] and 1.73 [s.d.=1.12] , respectively), though 41% of women had no vocational needs. Women were more likely to have some educational need identified: 43% were identified as having mild educational needs. Nearly all of the women had some substance abuse need. The average score was 2.55 (s.d.=1.27); just 9% were identified as having no problems with substance abuse while 61% had a need of 3 (moderate need) or higher.

[3] Each inmate goes through a classification process at intake. Multiple prison staff members assess each individual as quickly as possible to determine each inmate's needs and appropriate housing level. Prison staff making these decisions include correctional officers, classification officers, behavioral health, medical staff, etc. See NMCD policy CD-080100 for a description of the process. Note, though, that the form used to capture the criminogenic needs listed here has since changed. The form used relevant to this study is contained in Appendix F.

Chart 2.1. Criminogenic need scores



Risk scores

When women enter prison, they are assessed for the risk they pose as an inmate (institutional risk); risk scores range from I to IV. In addition, when an offender is preparing for release and will be monitored under community supervision, a community risk assessment is administered. The goal of this community risk instrument is to predict the likelihood of recidivism. We include both measures of risk—institutional and community.

Offenders who are classified at higher levels of institutional risk may have less access to programming, though per NMCD policy (CD-080100), women up to Level III can be housed and participate in programs together. Nearly half of the women in the sample were classified as Level II initially, as shown in the table below. Just under 25% were classified as Level III or higher; only 2% of those were classified as Level IV.

In terms of community risk, women were most frequently (40%) assessed at a medium risk level. Just 10% were assessed as an extreme risk, and the remainder were evenly split between low (25%) and high risk (25%).

Table 2.5. Initial classification level and risk level

Initial classification level		Risk level	
I	32%	Minimum	25%
II	45%	Medium	40%
III	22%	High	25%
IV	2%	Extreme	10%
N	397	N	424

Section 3: Program participation

One of the primary purposes of this study is to better understand program utilization among female inmates. In this section, we explore which programs women participated in, and assess whether their characteristics and other factors play a role in program utilization. We are especially interested in whether women access programs associated with their criminogenic needs and to what extent risk and staff recommendations may play a role in program participation. We examine program participation overall (i.e., any program participation) as well as participation in particular types of programs (education, substance abuse, etc.).

Which programs do women participate in?

Over two-thirds (68.5%, N=292) of the women participated in one or more programs during their incarceration. Among those who participated in prison programming, most (58%) participated in only one program, though women participated in up to ten programs. In the table below we illustrate program participation by category, completion rates, and credit earned among those who participated in one or more programs. Note that in many cases, it was unclear whether the individual completed the program and therefore report whether there was definitive evidence of program completion. We report both the rate of earned credit relative to program completion as well as average credit received. In Appendix B, we provide these data for women's participation in specific programs within each category.

Among female offenders who participated in one or more programs, the most common was life skills (87%). All of the women who participated in a life skills program engaged in the Recidivism Reduction Program; some of the women also participated in other life skills programs such as parenting classes. Nearly all (97%) women completed the Recidivism Reduction Program and nearly all of those received some credit for their participation (99%). The average credit earned was 44.5 days. Credit was not offered for the other life skills programs.

Though a distant second, the next most common type of program women participated in was substance abuse (27%), which was most often documented in the files as either Therapeutic Communities or Residential Drug Abuse Program. Completion rates were high for these programs; most women (89%) completed one or more substance abuse programs. Almost all (94%) of the women who completed the program(s) received credit for their participation, with an average of approximately 60 days.

Nearly 20% of women participated in educational programming. Clear evidence of program completion was present in 35% of the cases and 65% of those received credit for their participation. Women who participated in and earned credit for educational programming received the greatest average days of credit relative to other program areas, with an average of 88 days.

Fewer women participated in mental health/cognitive programs (16%) or vocational programs (11%). However, completion rates among participants were high in these areas: 87% completed mental health/cognitive programs and all of the women completed vocational programs. It is possible, though, that unless the programs are completed, there is no documentation of program participation, so these completion rates should be considered preliminary. Finally, just one woman's file included

documentation of participation in a health program. It is likely that other women participated, but health programs are not associated with earned credit and therefore may not be documented.

Importantly, the NMCD recently revised their policies to require completion of a program as a prerequisite to earning credits. Thus, it is likely that the amount of credit earned reported here may be different than what NMCD would currently award, especially in programs with multiple components such as those focused on substance abuse.

Table 3.1. Type of program participation, completion rates, and lump sum credit received

	Type of program among those who participated (N=292)		Evidence of completion of program		Received credit of those who completed		Average credit received
Program	**N**	**%**	**N**	**%**	**N**	**%**	**Mean (s.d.) (min-max)**
Physical health	1	<1%	0	0.0%	n/a		n/a
Life skills	255	87%	248	97%	246	99%	44.5 (17.2) 2-62
Vocational	32	11%	32	100%	40	56%	31.67 (7.07) 30-60
Education programs	58	20%	20	35%	67	65%	87.7 (19.22) 30-120
Substance abuse	80	27%	71	89%	13	94%	59.6 (29.52) 7-150
Mental health/cognitive	47	16%	41	87%	18	98%	36.8 (22.00) 30-150

Who participates in programs?

Regardless of the type of program, women who participated in one or more prison programs were incarcerated for the first time and were incarcerated for a longer period of time. Women who participated in one or more programs and life skills programs were less often serving time for a property crime, otherwise, there were no significant differences by offense type. We also found some differences by program type. Women who participated in vocational programming were slightly more likely to be white than non-white; no other statistically significant differences were found with respect to race/ethnicity within the other program types. Women who participated in life skills programs were older while those who participated in education programs were younger. However, this variable was not significantly related to any other type of program participation.

While not shown in the table below, we found no statistically significant differences between program participation and the following variables: marital status, prior arrests (of any type and for new crimes only), prior adjudications, prior convictions, and any current offense type with the exception of property crime as noted above. Those results are available in Appendix C.

Table 3.2. Characteristics of women and program participation

		Any Program	Life skills	Vocational	Education	Substance Abuse	Mental health/ cognitive
Age	Participated	34.32 (8.745) N=292	34.75** (8.92) N=255	34.53 (9.221) N=32	31.52* (9.185) N=58	34.44 (7.793) N=80	35.02 (9.284) N=47
	Did not participate	32.90 (8.339) N=134	32.55 (8.04) N=171	33.81 (8.595) N=394	34.24 (8.50) N=368	33.74 (8.823) N=346	33.73 (8.553) N=379
Race	White, participated	70% N=118	63% N=118	12%* N=118	14% N=118	20% N=118	11% N=118
	Non-white, participated	68% N=308	59% N=308	6% N=308	13% N=308	19% N=308	11% N=308
Length of incarceration	Participated	514.69*** (475.30) N=292	480.61** (462.01) N=254	1040.03*** (771.481) N=32	782.93*** (614.911) N=58	745.24*** (548.45) N=80	1082.38*** (613.141) N=47
	Did not participate	243.13 (431.02) N=134	355.01 (492.65) N=172	380.35 (409.161) N=394	374.26 (427.919) N=368	356.99 (429.25) N=346	348.98 (389.476) N=379
Prior incarcerations	Has prior incarcerations, participated	46%*** N=154	41%*** N=154	3%** N=154	6%*** N=154	8%*** N=154	3%*** N=154
	No prior incarcerations, participated	82% N=272	71% N=272	10% N=272	18% N=272	25% N=272	16% N=272
Current property	Has current property offense, participated	58%** N=107	47%** N=107	8% N=107	16% N=107	15% N=107	9% N=107
	No current property offense, participated	72% N=319	64% N=319	7% N=319	13% N=319	20% N=319	12% N=319

*p≤.05, **p≤.01, ***p≤.001

What role do recommendations play in program participation?

Prison staff recommend programs for women at intake and periodically throughout incarceration. In this section, we explore program recommendations and program participation. Staff recommended programming for nearly all (96%, N=410) of the women in the sample. Below, we summarize recommendations within five program types and programming generally. These program types

correspond with the areas of need summarized on the intake forms as well as mental health recommendations.

Prison staff rarely recommended life skills programs (reentry programming or parenting programming). Education was recommended for just over half of the women, while vocational training was recommended for a little under one-third. Prison staff recommended substance abuse programming or mental health related programming for the vast majority (81%) of female offenders.

Generally, recommendations far exceeded actual program participation. With the exception of life skills programs, fewer than 20% of women who were recommended for a particular program participated in one or more programs in that area (see column two in Table 3.3 below). However, 70% of women who were recommended for some type of program participated in one or more programs. There were few differences in particular types of program participation by whether they were recommended (columns 2 and 3). The exceptions were mental health/cognitive programming, educational programming, and programming overall. Women were recommended for educational or mental health/cognitive programming were more likely to participate in those programs.

In the final set of columns, we examine the relationship between program participation and recommendations from a slightly different lens. Among women who participated in a particular program type, we examine the proportion who were recommended for programming in that area. In the last column, we examine the proportion of women who did not participate in a program but were recommended for it. For example, 92% of women who participated in mental health/cognitive programming were recommended for programming in this area. However, among women who did not participate in mental health/cognitive programming, 79% had at least one recommendation for mental health/cognitive programming. Thus, women are more likely to participate in a mental health program if recommended. Likewise, women are significantly more likely to participate in educational programming if recommended and are more likely to participate in any type of program if prison staff recommend at least one program.

Table 3.3. Recommended program area if one or more recommendations were made

	Recommended		Of those recommended, how many participated	Of those not Recommended, how many participated	Of those who participated, how many were recommended	Of those who did not participate, how many were recommended
	N	%	%		%	
Any area	410	96%	70%***	25%	99%***	91%
Life skills	18	4%	67%	60%	5%	4%
Vocational	138	32%	7%	8%	31%	33%
Education	225	53%	16%*	10%	64%*	51%
Substance abuse related	345	81%	19%	19%	81%	81%
Mental health/cognitive	344	81%	13%*	5%	92%*	79%

*p≤.05, ***p≤.001

We also examined total number of recommendations (of any type) and program participation. Staff recommended between zero to fifteen programs to women. Women who actually participated in one or more programs had a greater average number of program recommendations than those who did not. However, this finding was only statistically significant for programming overall, life skills programming, and education programming.

Table 3.4. Average number of recommendations by participation in program and program type

	Any Program	Life skills	Vocational	Education	Substance Abuse	Cognitive
Participated in programming	4.02*** (2.093) N=292	3.97*** (2.041) N=255	3.69 (2.455) N=32	4.2* (2.092) N=58	4.00 (2.228) N=80	4.06 (2.201) N=47
Did not participate	2.92 (2.228) N=134	3.24 (2.345) N=171	3.68 (2.176) N=394	3.6 (2.202) N=368	3.60 (2.184) N=346	3.63 (2.192) N=379

***p≤.001

Overall, these data suggest that there is some relationship between program participation and recommendations. First, there appears to be a relationship between recommendations for, and participation in, specific program types as well as program participation overall. Women appear to be more likely to participate in educational and mental health/cognitive programs if they are specifically recommended for them. While this is not the case for other program types, we did find that any recommendation was associated with increased program participation of some type.

Second, there does appear to be a relationship between total number of recommendations and program participation. Women more often participate in one or more programs if they have a greater number of recommendations. That additive effect also seems to influence participation in life skills programming, and to a lesser degree, education program participation.

What is the relationship between criminogenic needs, program recommendations, and participation?

Next, we examined whether there was a relationship between the type and level of criminogenic need identified, participation in related programming, and prison staff recommendations. We would expect that women who have greater criminogenic needs would be more likely to participate in programming related to those needs and that prison staff would be more likely to make relevant program-related recommendations. We explored this in four particular areas—life skills, vocational, education, and substance abuse—as well as by any programming. These results are displayed in Table 3.5 below.

Women who participated one or more programs had significantly higher needs overall. Likewise, women who participated in life skills programs had a significantly greater among of life skills needs than women who did not participate. Conversely, women who participated in vocational programs had

significantly fewer average vocational needs than those who did not (.81 vs. 1.26). We found no statistically significant differences in level of need for either substance abuse or education programming.

Prison staff recommended programming for women with significantly greater needs in the areas of substance abuse and education. While not statistically significant, it is worth noting that prison staff recommended vocational programming and programming overall to women with greater needs.

Generally, these results suggest that while program recommendations may be driven by higher criminogenic need in those areas, this does not necessarily translate into program utilization. Further, with the exception of life skills, and perhaps substance abuse (though not statistically significant), women who participated in programs may not be those who had the highest needs in those particular areas. Women were, however, more likely to participate in one or more programs if they had higher criminogenic needs overall.

Table 3.5. Average need by participation and recommendations by area of need

	Any program		**Life Skills**		**Vocational**		**Education**		**Substance Abuse**	
	Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Participated	1.38	1.21*	.72	.39***	.81	1.26*	1.58	1.75	2.65	2.52
	(.71)	(.59)	(.97)	(.78)	(1.17)	(1.18)	(1.24)	(1.10)	(1.32)	(1.26)
	N=278	N=122	N=241	N=159	N=31	N=369	N=57	N=343	N=77	N=323
Recommended	1.33	1.06	.44	.60	1.26	1.21	2.02	1.36***	2.71	1.82***
	(.67)	(.94)	(.86)	(.91)	(1.16)	(1.19)	(.95)	(1.20)	(1.11)	(1.68)
	N=388	N=12	N=18	N=382	N=129	N=271	N=220	N=180	N=329	N=71

*p≤.05, ***p≤.001

What role does risk level play in program participation?

As noted previously, we included measures of both institutional risk and community risk in this analysis. It is hypothesized that female offenders who pose a greater institutional risk will be less likely to engage in programming due to more limited access to programming. However, overall program participation was similar across classification levels, with some decrease in participation among women at Level IV. These variations, though, were not statistically significant.

When considering participation by type of program, we found that women who were initially classified as Level III participated in programming at greater rates than women classified at other levels for all types of program except life skills. While these differences were not always statistically significant, the patterns were similar. Women who participated in life skills programs were slightly more likely to be classified as Level I or Level II, but these differences were not statistically significant.

Table 3.6. Program participation by initial classification level

	Initial classification level			
	I (N=127)	II (N=177)	III (N=86)	IV (N=7)
Any program	69%	70%	65%	57%
Life skills	61%	63%	52%	43%
Vocational*	4%	6%	14%	0
Education	13%	11%	21%	14%
Substance abuse related*	15%	17%	30%	14%
Mental health/cognitive related***	6%	7%	29%	14%

*p≤.05, **p≤.01, ***p≤.001

While the community risk assessment would likely not be taken into consideration by facility staff when program recommendation and participation decisions are made, it is important to assess the relationship between community risk and programming. Best practices indicate that offenders who pose a low-level or extreme risk are less likely to benefit from prison programming while offenders who pose a medium or high-level risk are more likely to benefit from risk-reduction interventions (Burke, et al., 2010).

Women who participated in any program, life skills programs and education programs were most often deemed medium-risk. Vocational programs and mental health/cognitive programs were most often comprised of women deemed low-risk, while women who participated in substance abuse programs were most often either low or medium-risk. Overall, most women who participated in programs were either low or medium risk.

Table 3.7. Community risk level by program

	Any program	Life skills	Vocational	Education	Substance abuse	Mental health/ Cognitive
Minimum	29%	31%	59%	28%	40%	47%
Medium	44%	44%	31%	40%	41%	40%
High	21%	20%	6%	24%	18%	11%
Extreme	6%	5%	3%	9%	1%	2%
N	291	254	32	58	80	47

Risk, need, and program participation

Next, we examined the relationship between average criminogenic needs, program participation and community risk level. Women assessed as low, medium, or extreme risk and who participated in programming of some sort had higher average needs than women in these categories who did not participate in programming. However, none of these differences were statistically significant. While not shown below, we also examined specific types of needs by risk level and specific program participation (e.g., substance abuse, mental health/cognitive) but found no statistically significant differences. These results suggest that program participation is *not* related to the combination of community risk level and needs.

Table 3.8. Needs, risk, and program participation

RNA score	Participated in any program	Average Need Score	N
Low	Yes	1.37 (.84)	81
	No	1.01 (.53)	20
Medium	Yes	1.42 (.65)	121
	No	1.24 (.52)	34
High	Yes	1.28 (.63)	61
	No	1.31 (.61)	44
Extreme	Yes	1.41 (.74)	14
	No	1.15 (.68)	23

Multivariate analyses assessing program participation

While the descriptive statistics thus far provide some information about the factors associated with program participation, we do not know which factors are most strongly related to program participation once other factors are taken into consideration. Thus, we calculated a series of logistic regressions examining the characteristics associated with program participation overall, as well as for each type of program. We included only those variables that were found to be statistically significant in the analyses above or had theoretical import. Further, because there were so few women who were initially classified as Level IV, we combined Levels III and IV for the multivariate analyses.

We calculated a series of five nested models for each dependent variable. The first model included only demographic information (age and race). The second model added variables related to the woman's criminal history (measured here by prior incarceration as this was the only measure that was significant in the bivariate analyses) and current offense (current property offense). The third added variables related to the woman's confinement (length of incarceration and initial classification level). The fourth model included each woman's assessed criminogenic needs and recommended programming. The last model added calculated community risk level. We treated recommended programming as a dichotomous variable in all of the program-specific models. However, since nearly everyone had at least one program recommendation, we opted to use the total number of recommendations to assess recommendations for participation in any program. We discuss the results below.

Overall program participation

The first set of models examines overall program participation. The fit of each model was improved with the addition of each set of variables. Demographic variables (Model 1) did not predict program participation, but criminal history (Model 2) did. The odds of participating in a program were significantly lower if a woman had been previously incarcerated. Women currently serving time for a property offense were also significantly less likely to participate in programming. In Model 3, we added confinement-related variables. Offenders incarcerated for a longer time were more likely to participate in one or more programs, with every day of incarceration increasing the odds of participating by 1.002.

However, the other confinement-related variable, initial classification level, was not statistically significant.

Both recommendations and needs, added in Model 4, were related to program participation. We found that for every one-unit increase in programming recommendations, the odds of program participation increased by 1.155. In other words, the more programs staff recommended, the more likely it was that offenders would participate in one or more programs. Further, women with higher needs scores were more likely to participate in one or more programs. Note that once recommendations and needs were included, current property offense was no longer statistically significant.

The final model, which includes the risk score, significantly improves model fit (χ^2=12.001, df=3, p<.01). Women classified as extreme risk were significantly less likely to participate in one or more programs relative to women assessed as low risk, holding all other variables constant. This is consistent with the relationship found in the bivariate analyses above.

Table 3.9. Summary of logistic regression results for any program participation

Any participation in programming (N=378)						
Model	**Variable**	**Model 1 Exp (B)**	**Model 2 Exp (B)**	**Model 3 Exp (B)**	**Model 4 Exp (B)**	**Model 5 Exp (B))**
Demographics	White	1.174	1.635	1.746	1.642	1.655
	Age at intake	1.022	1.026	1.030	1.034*	1.024
Criminal history	Prior incarcerations		.165***	.264***	.280***	.306***
	Current property offense		.522*	.526*	.572	.604
Confinement related	Days of incarceration			1.002***	1.002***	1.002***
	Classification Level 2			1.273	1.264	1.250
	Classification Level 3 or 4				.618	.631
Recommendations and needs	Recommendations				1.142*	1.155*
	Total need score				2.000**	1.897**
Risk	Medium					1.457
	High					.773
	Extreme					.306*
	Constant	1.049	2.239	.849	.159	.237
	-2LL	461.543	398.642***	378.954***	363.475**	351.474**

*p≤.05, **p≤.01, ***p≤.001

Life skills programming

Next, we examined the characteristics associated with life skills program utilization, which is almost entirely comprised of participation in the Recidivism Reduction program. The table below displays the results. One demographic variable, age at intake, was positively and significantly related to life skills program participation. The odds ratio indicates that for every one year increase in age, participation in

life skills programming increased by 1.032 times. However, once risk was accounted for in Model 5, age was no longer statistically significant.

Both criminal history variables were negatively and significantly related to life skills program participation. Offenders who had prior incarcerations were less likely to participate in life skills programs. Similarly, women with a current property offense were about 0.5 times less likely to participate in life skills programming.

The confinement-related variables were not significantly associated with life skills programming; further, Model 3 was not a significant improvement over Model 2. Model 4 introduced recommendations and needs related to life skills. While recommendations were not associated with life skills programming, the needs score was associated. With every one-unit increase in the life skills needs score, the odds of participating in a life skills program increased 1.6 times, holding all other variables constant. Finally, Model 5, which introduced risk level, was a significant improvement over Model 4. Women with a risk score of extreme were much less likely to participate in life skills programming, holding all other variables constant.

Table 3.10. Logistic regression results for life skills program participation

Participation in life skills programming (N=380/ 378 with RNA)						
Block	**Variable**	**Model 1 Exp (B)**	**Model 2 Exp (B)**	**Model 3 Exp (B)**	**Model 4 Exp (B)**	**Model 5 Exp (B)**
Demographics	White	1.262	1.644	1.654	1.650	1.601
	Age at intake	1.032**	1.034**	1.036**	1.040**	1.026
Criminal history	Prior incarcerations		.264***	.302***	.287***	.333***
	Current property offense		.535*	.527*	.509**	.543*
Confinement related	Days of incarceration			1.000	1.000	1.000
	Classification Level 2			1.300	1.363	1.430
	Classification Level 3/4			.610	.644	.678
Recommendations and needs	Recommendations				.967	.932
	Total need score				1.623***	1.610***
Risk	Medium					.972
	High					.626
	Extreme					.262**
	Constant	.494	.858	.629	.437	.808
	-2LL	500.540	459.589***	453.602	439.918*	429.314*

*p≤.05, **p≤.01, ***p≤ .001

Vocational programming

We then examined participation in vocational programs. When first introduced, neither of the demographic variables was statistically significant. However, beginning with Model 3, there was a

relationship between race and participation in vocational training. White women were a little over three times more likely to participate in vocational training, once all other variables in the model were included. When initially entered in Model 2, prior incarcerations were statistically significant; women with prior incarcerations were less likely to participate in vocational programming. However, once the confinement-related variables were introduced in Model 3, prior incarcerations were no longer statistically significant. Length of incarceration was strongly related to vocational programming: for every one additional day of incarceration, the odds of participating in one or more vocational programs increased by 1.002. Classification level, though, was not statistically significant.

Model 4 introduced vocational recommendations and needs; neither was statistically significant. Further, the addition of these variables did not improve overall model fit. There was a marginally significant improvement to the model fit with the addition of risk level in Model 5 (χ^2=11.24, df=3, p<.05). The odds of participation in vocational programming were significantly lower for those assessed as high risk relative to low risk.

Table 3.11. Logistic regression results for vocational program participation

Participation in vocational training programming (N=378)						
Block	**Variable**	**Model 1 Exp (B)**	**Model 2 Exp (B)**	**Model 3 Exp (B)**	**Model 4 Exp (B)**	**Model 5 Exp (B)**
Demographics	White	1.958	2.160	3.529**	3.611**	3.053*
	Age at intake	1.003	1.003	1.006	1.000	.969
Criminal history	Prior incarcerations		.242**	.505	.543	.850
	Current property offense		1.085	1.381	1.274	1.482
Confinement related	Days of incarceration			1.002***	1.002***	1.002***
	Classification Level 2			2.009	1.969	2.216
	Classification Level 3/4			1.543	1.591	1.380
Recommendations and needs	Recommendations				1.108	1.022
	Total need score				.744	.695
Risk	Medium					.453
	High					.120**
	Extreme					.044
	Constant	.056	.076	.010	.016	.103
	-2LL	196.889	188.202*	160.711***	158.403	147.163*

*p≤.05, **p≤.01, ***p≤ .001

Education programming

The table below summarizes the results of the analyses of education program utilization. One demographic variable, age at intake, was statistically significant. The odds of participation decreased 0.955 times for each one-year increase in age.

Model 2 was a statistically significant improvement over Model 1 (χ^2=13.34, df=2, p<.01). Offenders with prior incarcerations were significantly less likely to participate in education programming. The level of statistical significance, though, decreased as additional variables were added to the model suggesting that this variable is not strongly related to educational program participation. Confinement-related variables were added in Model 3 and were a significant improvement over Model 2 (χ^2=17.894, df=3, p<.001). Days incarcerated was strongly related to educational programming. Every day of incarceration increased the odds of educational programming by 1.001. However, initial classification level, the other confinement variable, was not statistically significant.

Recommendations and needs were added in Model 4. Women who had been recommended for participation in an educational program were 2.41 times more likely to participate. However, level of educational need was not related to programming. The final model, which included the risk score, was *not* a significant improvement over Model 4 (χ^2=1.372, df=3) and none of the risk levels were statistically significant.

Table 3.12. Logistic regression results for education program participation

Participation in education programming (N=378)						
Block	**Variable**	**Model 1 Exp (B)**	**Model 2 Exp (B)**	**Model 3 Exp (B)**	**Model 4 Exp (B)**	**Model 5 Exp (B)**
Demographics	White	1.234	1.346	1.643	1.782	1.904
	Age at intake	.954**	.958*	.954**	.953*	.953*
Criminal history	Prior incarcerations		.283***	.449*	.432*	.447
	Current property offense		1.144	1.279	1.168	1.182
Confinement related	Days of incarceration			1.001***	1.001***	1.001***
	Classification Level 2			.932	1.042	.987
	Classification Level 3/4			.990	1.088	1.054
Recommendations and needs	Recommendations				2.410**	2.412*
	Total need score				.899	.896
Risk	Medium					1.523
	High					1.055
	Extreme					1.055
	Constant	.729	.871	.227	.154	.228
	-2LL	306.808	293.468**	275.574***	269.184*	267.812

*p≤.05, **p≤.01, ***p≤ .001

Substance abuse

The next set of models focuses on substance abuse programming. The demographic variables were not significantly related to substance abuse program participation. When first introduced in Model 2, prior incarcerations had a significant negative relationship with substance abuse program participation. However, the strength of that relationship declined with the addition of other variables, suggesting that

prior incarcerations were not strongly related to substance abuse programming. Length of incarceration, introduced in Model 3, had a significant positive relationship with substance abuse programming. The odds of participation in substance abuse programming increased by 1.001 for every day spent in prison. The initial classification level, the second confinement-related variable, was not statistically significant.

Neither substance abuse recommendations nor substance abuse needs scores were significantly related to substance abuse program participation. Further, the overall model fit did not improve with the addition of these variables in Model 4 (χ^2=1.891, df=2). The final model added risk level, which significantly improved the overall model fit (χ^2=12.51, df=3, p<.01). Women assessed as extreme risk were significantly less likely to participate in substance abuse programming.

Table 3.13. Logistic regression results for substance abuse program participation

Participation in substance abuse programming (N=378)						
Block	**Variable**	**Model 1 Exp (B)**	**Model 2 Exp (B)**	**Model 3 Exp (B)**	**Model 4 Exp (B)**	**Model 5 Exp (B)**
Demographics	White	1.105	1.296	1.586	1.576	1.469
	Age at intake	1.009	1.008	1.009	1.009	.997
Criminal history	Prior incarcerations		.283***	.431*	.432*	.496
	Current property offense		.676	.756	.780	.829
Confinement related	Days of incarceration			1.001***	1.001***	1.001***
	Classification Level 2			1.179	1.226	1.346
	Classification Level 3/4			1.369	1.516	1.562
Recommendations and needs	Recommendations				1.282	1.244
	Total need score				1.118	1.129
Risk	Medium					.750
	High					.587
	Extreme					.031*
	Constant	.174	.275	.103	.058	.117
	-2LL	376.029	356.567***	334.852***	332.871	320.361**

*p≤.05, **p≤.01, ***p≤ .001

Mental health/Cognitive programs

Finally, we considered mental health programming. The demographic variables were not significant. Women were less likely to participate in mental health/cognitive programs if they had been incarcerated previously, as shown in Model 2. However, once other variables were added to the analyses the strength of that relationship decreased. In Model 3, we added confinement-related variables. Only length of incarceration was positively and significantly related to mental health/cognitive program participation. That is, the longer women were confined, the more likely they were to participate. The addition of recommendations in Model 4 and risk in Model 5 did not improve the fit of the model, and

those variables were not statistically significant. Thus, length of incarceration was the only variable that was strongly associated with mental health/cognitive program participation.

Table 3.14. Logistic regression results for mental health/cognitive program participation

Participation in mental health/cognitive programming (N=378)						
Block	**Variable**	**Model 1 Exp (B)**	**Model 2 Exp (B)**	**Model 3 Exp (B)**	**Model 4 Exp (B)**	**Model 5 Exp (B)**
Demographics	White	.830	.977	1.631	1.612	1.503
	Age at intake	1.020	1.018	1.027	1.027	1.012
Criminal history	Prior incarcerations		.120***	.274*	.278	.318
	Current property offense		.663	.846	.842	.867
Confinement related	Days of incarceration			1.002***	1.002***	1.002***
	Classification Level 2			1.283	1.267	1.409
	Classification Level 3/4			2.787	2.820	2.884
Recommendations	Recommendations				1.156	.929
Risk	Medium					.907
	High					.376
	Extreme					.024
	Constant	.058	.102	.011	.009	.024
	-2LL	253.314	231.773***	179.181***	179.118	172.061

*p≤.05, **p≤.01, ***p≤ .001

Summary of final models

In order to more easily compare which variables were associated with participation in which program, we summarize the final models in Table 3.15 below. Generally, demographic variables were not related to program participation. There were two exceptions, however. Women who were older were significantly less likely to participate in educational programming, and women who were white were significantly more likely to participate in vocational training.

Females who were incarcerated previously were less likely to participate in programming, regardless of the type. However, this variable was significantly related only to program participation overall as well as life skills program participation. Women who had a current property offense were significantly less likely to participate in life skills programming. This variable, though, was not significantly related to any of the other program types and the direction of the relationship changed depending on the program assessed.

In nearly every model, we found that the longer women were incarcerated, the greater their odds of participating in a program. This variable was statistically significant and positively related to programming overall and to every type of programming except participation in life skills (Recidivism

Reduction). The second confinement-related variable, initial classification level, was not significantly related to program participation.

Staff program recommendations were significantly related to overall program participation and education programming. Women who were recommended for a greater number of programs, regardless of type, were more likely to participate in one or more programs. Here we did not match the type of recommendation to the program type. However, for each of the specific programs we did match the recommendations with type. Women who were recommended for educational programming were more likely to participate in education programs. Recommendations were not significantly related to other program types.

Offenders whose overall needs score was greater were more likely to participate in one or more programs. Once we matched need type to program participation type, we found that only women who had greater life skills need were more likely to participate in life skills program. However, we expect that this may be a spurious relationship because so many female inmates participated in life skills programming and so few actually had life skills needs identified.

Finally, risk level was associated with program participation overall as well as participation in substance abuse, vocational training, and life skills programs. Women assessed extreme risk were significantly less likely to participate in substance abuse programs, life skills programs and programming overall relative to low-risk women. The odds of participation in vocational training were significantly lower for those who were assessed as medium risk.

Table 3.15. Logistic regression results: summary of program participation models

Participation in programming (N=378)							
Block	**Variable**	**Any program**	**Life skills**	**Vocational training**	**Education**	**Substance abuse**	**Mental health/ cognitive**
Demographics	White	1.655	1.601	3.053*	1.904	1.469	1.503
	Age at intake	1.024	1.026	.969	.953*	.997	1.012
Criminal history	Prior incarcerations	.306***	.333***	.850	.447	.496	.318
	Current property offense	.604	.543*	1.482	1.182	.829	.867
Confinement related	Days of incarceration	1.002***	1.000	1.002***	1.001***	1.001***	1.002***
	Classification Level 2	1.250	1.430	2.216	.987	1.346	1.409
	Classification Level 3/4	.631	.678	1.380	1.054	1.562	2.884
Recommendations and needs	Recommendations	1.155*	.932	1.022	2.412*	1.244	.929
	Total need score	1.897**	1.610***	.695	.896	1.129	---
Risk	Medium	1.457	.972	.453	1.523	.750	.907
	High	.773	.626	.120**	1.055	.587	.376
	Extreme	.306*	.262**	.044	1.055	.031*	.024
	Constant	.237	.808	.103	.228	.117	.024
	-2LL	351.474**	429.314*	147.163*	267.812	320.361**	172.061

*p≤.05, **p≤.01, ***p≤ .001

Section 4: Recidivism

The second purpose of this study is to explore the relationship between program participation and recidivism. Recidivism can be measured in many ways; we have chosen to include five distinct measures here: subsequent arrests, subsequent adjudications, subsequent convictions, subsequent incarcerations for any offense, and subsequent incarcerations for a new crime (not just parole or probation violations). We also examine subsequent offending overall by combining all of these recidivism measures.

Most women (67%) recidivated within the four-year follow-up period. Most (60%) were arrested one or more times. Nearly all arrests were for a new crime; just 27 women were arrested for probation/parole violations only. Just under one-third of the women had one or more subsequent felony court cases, 25% were re-convicted in district court, and nearly 40% were returned to prison. However, most of these were for probation/parole violations as just 16% were returned for a new crime only (labeled as "incarcerations, no PVs" in this and subsequent tables). These data are summarized in Table 4.1 below.

Table 4.1. Recidivism

	% Yes (N)	Average (s.d.)	Range
Subsequent of any type	**67% (286)**		
Arrests	60% (254)	3.17 (2.65)	1-18
Adjudications	27% (116)	1.71 (1.10)	1-6
Convictions	25% (107)	1.64 (1.03)	1-6
Incarceration (any)	39% (166)	1.26 (.50)	1-4
Incarceration (no PVs)	16% (66)	1.00 (0)	1

What characteristics are associated with recidivism?

Regardless of which measure of recidivism was used, women who were younger or were racial/ethnic minorities were recidivated more often, though this was not always statistically significant. Further, women who were not married were re-arrested and recidivated overall at a rate that was significantly higher than those who were married. They were also re-incarcerated less often, regardless of the reason, though this was not statistically significant. However, marital status played no obvious role in re-adjudications or re-convictions.

Table 4.2. Demographics and recidivism

		Arrest	Adjudication	Conviction	Incarceration	Incarceration, no PV	Any subsequent
Age	No subsequent offense	35.24 (9.61) N=172	34.50 (8.91) N=310	34.42 (8.88) N=319	34.75 (9.10) N=260	34.18 (8.87) N=360	35.54 (9.83) N=140
	Subsequent offense	32.94** (7.79) N=254	32.19** (7.53) N=116	32.21* (7.68) N=107	32.49** (7.68) N=166	32.20 (7.07) N=66	33.05** (7.88) N=286
Race	Non-White	64% N=308	30% N=308	28% N=308	42% N=308	17% N=308	71% N=308
	White	48%** N=118	20%* N=118	19% N=118	31%* N=118	11% N=118	59%* N=118
Marital status	Not married	62% N=340	27% N=340	25% N=340	41% N=340	16% N=340	70% N=340
	Married	51%* N=86	27% N=86	26% N=86	33% N=86	13% N=86	56%** N=86

*p≤.05, **p≤.01, ***p≤ .001

Time incarcerated was associated with recidivism. Women who were re-arrested served significantly less time in prison than women who were not re-arrested. While not statistically significant, the same pattern occurred for women who were adjudicated/convicted, and for recidivism overall, but not for those who were re-incarcerated.

Post-release supervision also appears to play a role in recidivism. Females who were under community supervision post-release were re-adjudicated less often than women who served no parole/probation term post-release. This difference was statistically significant. While a lower proportion of supervised female offenders were re-arrested compared to those who were not supervised post-release, this was not statistically significant. Conversely, women who served a term of community supervision were incarcerated for any type of offense more often than women who were not supervised after release from prison; this difference was statistically significant. Likely, this reflects revocations due to probation/parole violations as only women who are under community supervision are subject to such sanctions. Indeed, offenders who were re-incarcerated for a new offense only were significantly *less* likely to be serving a term of community supervision.

Table 4.3. Criminal justice system-related characteristics and recidivism

		Arrest	Adjudication	Conviction	Incarceration	Incarceration, no PV	Any subsequent
Length of incarceration	No recidivism	488.31 (566.70) N=172	451.05 (512.82) N=310	446.03 (507.35) N=319	426.38 (521.79) N=260	424.08 (490.29) N=360	513.02 (613.99) N=140
	Recidivism	390.35* (403.66) N=254	373.39 (365.37) N=116	381.82 (375.39) N=107	435.41 (401.51) N=166	461.65 (406.62) N=66	389.21** (389.70) N=286
Release type	No supervision	66% N=120	43% N=120	40% N=120	28% N=120	22% N=120	71% N=120
	Supervision	57% N=306	21%*** N=306	19%*** N=306	43%** N=306	13%* N=306	66% N=306

*p≤.05, **p≤.01, ***p≤ .001

Risks and needs

Community risk level was significantly associated with recidivism, though the nature of this relationship varied by recidivism measure. A positive, linear relationship was found between risk level and subsequent arrests, incarcerations for any type of offense, and subsequent offending overall. However, while the proportion of individuals re-adjudicated, re-convicted, or re-incarcerated for a new offense increased up to a risk level of "high," the proportion deemed "extreme" risk re-offended less often than the proportion who were "high" risk.

Table 4.4. Risk score and recidivism

	Arrest***	Adjudication***	Conviction***	Incarceration*	Incarceration, no PV**	Any subsequent***	N
Minimum	43%	12%	11%	28%	7%	49%	107
Medium	59%	27%	26%	39%	16%	69%	168
High	71%	42%	28%	46%	23%	78%	107
Extreme	79%	31%	26%	50%	19%	86%	42

*p≤.05, **p≤.01, ***p≤ .001

We also assessed average need score by recidivism category. We found that overall average need was significantly associated with re-incarceration. Contrary to what may be expected, women with lower overall needs were more often re-incarcerated for either a new offense or any type of offense.

Next, we examined average need in each of the particular need areas by each of the recidivism categories. We found no statistically significant differences in recidivism by substance abuse need or educational needs. However, women who returned to prison (for a new offense or any offense) had significantly lower vocational needs than women who did not return to prison. Life skills needs were also related to recidivism. Women who returned to prison for any reason had significantly lower average life skills needs than women who did not return to prison.

Table 4.5. Needs scores and recidivism

		Arrest	Adjudication	Conviction	Incarceration	Incarceration, no PV	Any subsequent
Total need score	Did not recidivate	1.31 (.72) N=162	1.34 (.68) N=292	1.35 (.69) N=301	1.38 (.68) N=243	1.36 (68) N=337	1.31 (.74) N=133
	Recidivated	1.34 (.65) N=238	1.29 (.68) N=108	1.26 (.66) N=99	1.24* (.66) N=157	1.16* (.65) N=63	1.33 (.64) N=267
Substance abuse need	Did not recidivate	2.54 (1.35) N=162	2.56 (1.29) N=292	2.56 (1.30) N=301	2.51 (1.31) N=243	2.58 (1.27) N=337	2.43 (1.4) N=133
	Recidivated	2.55 (1.22) N=238	2.51 (1.22) N=108	2.52 (1.20) N=99	2.60 (1.22) N=157	2.37 (1.27) N=63	2.61 (1.20) N=267
Educational need	Did not recidivate	1.64 (1.17) N=162	1.72 (1.13) N=292	1.71 (1.13) N=301	1.76 (1.13) N=243	1.75 (1.12) N=337	1.66 (1.22) N=133
	Recidivated	1.79 (1.08) N=238	1.75 (1.10) N=108	1.76 (1.10) N=99	1.67 (1.10) N=157	1.60 (1.10) N=63	1.76 (1.06) N=267
Vocational need	Did not recidivate	1.16 (1.23) N=162	1.24 (1.18) N=292	1.26 (1.19) N=301	1.33 (1.20) N=243	1.28 (1.19) N=337	1.20 (1.26) N=133
	Recidivated	1.26 (1.14) N=238	1.18 (1.18) N=108	1.10 (1.14) N=99	1.06* (1.14) N=157	.94* (1.06) N=63	1.24 (1.14) N=267
Life skills need	Did not recidivate	.50 (.89) N=162	.60 (.91) N=292	.61 (.92) N=301	.67 (.95) N=243	.62 (.93) N=337	.53 (.92) N=133
	Recidivated	.65 (.92) N=238	.57 (.92) N=108	.53 (.89) N=99	.46* (.84) N=157	.43 (.82) N=63	.62 (.91) N=267

*p≤.05

Criminal history

We assessed the relationship between criminal history and recidivism, using multiple measures of criminal history. Overall, prior criminal history was significantly related to recidivism: women with a prior criminal history re-offended more often. Further, a more extensive criminal history, as measured by total number of priors, was significantly associated with increased recidivism. Only a few measures of prior criminal history did not have a statistically significant relationship with particular measures of recidivism.

Table 4.6. Criminal history and recidivism

		Subsequent offense type					
		Arrest	**Adjudication**	**Conviction**	**Incarceration**	**Incarceration, no PV**	**Any subsequent**
Prior arrests (any)	No priors	29% N=48	8% N=48	8% N=48	17% N=48	4% N=48	40% N=48
	Priors	64%*** N=378	30%** N=378	27%** N=378	42%*** N=378	17%* N=378	71%*** N=378
Prior adjudications	No priors	47% N=135	18% N=135	17% N=135	29% N=135	11% N=135	56% N=135
	Priors	66%*** 291	32%** N=291	29%** N=291	44%** N=291	18% N=291	73%*** N=291
Prior convictions	No priors	47% N=151	19% N=151	18% N=151	31% N=151	12% N=151	56% N=151
	Priors	67%*** N=275	32%** N=275	29%** N=275	44%** N=275	18% N=275	73%*** N=275
Prior incarcerations	No priors	52% N=272	19% N=272	17% N=272	40% N=272	13% N=272	60% N=272
	Priors	74%*** N=154	42%*** N=154	40%*** N=154	36% N=154	20%* N=154	81%*** N=154
Priors of any type	No priors	19% N=31	0% N=31	0% N=31	10% N=31	0% N=31	26% N=31
	Priors	63%*** N=395	29%*** N=395	27%*** N=395	41%*** N=395	17%** N=395	70%*** N=395
Total average priors	No priors	2.77 (2.72) N=172	3.53 (3.01) N=310	3.60 (3.03) N=319	3.32 (2.99) N=260	3.69 (3.04) N=360	2.47 (2.43) N=140
	Priors	4.77*** (3.18) N=254	5.10*** (3.24) N=116	5.03*** (3.29) N=107	4.96*** (3.16) N=166	5.45*** (3.37) N=66	4.69*** (3.22) N=286

*p≤.05, **p≤.01, ***p≤ .001

We also assessed the relationship between current offense type and re-offending; we found that current offense was generally not significantly related to recidivism. There were two exceptions: drug and DWI offenses. Women whose current most serious offense involved a drug crime were re-adjudicated, re-convicted, or re-incarcerated for a new offense more often than women whose most serious offense was not a drug crime. Conversely, women with a DWI charge were re-adjudicated, re-convicted, or re-incarcerated for a new offense significantly less often than women who did not have a DWI charge.

Table 4.7. Current offense and recidivism

		Arrest	Adjudication	Conviction	Incarceration	Incarceration, no PV	Any subsequent
Current violent	Not violent	62% N=329	29% N=329	26% N=329	40% N=329	16% N=329	69% N=329
	Violent	52% N=97	23% N=97	22% N=97	37% N=97	14% N=97	60% N=97
Current property	Not property	59% N=319	27% N=319	25% N=319	38% N=319	16% N=319	67% N=319
	Property	61% N=107	28% N=107	27% N=107	43% N=107	14% N=107	67% N=107
Current drug	Not drug	57% N=255	22% N=255	21% N=255	38% N=255	12% N=255	65% N=255
	Drug	64% N=171	35%** N=171	31%* N=171	40% N=171	21%* N=171	71% N=171
Current DWI	Not DWI	59% N=397	29% N=397	26% N=397	40% N=397	17% N=397	67% N=397
	DWI	62% N=29	7%** N=29	7%* N=29	24% N=29	0%* N=29	69% N=29
Current other	Not other	60% N=404	28% N=404	26% N=404	39% N=404	16% N=404	67% N=404
	Other	50% N=22	14% N=22	9% N=22	36% N=22	9% N=22	68% N=22

*p≤.05, **p≤.01

What is the relationship between types of in-prison programming and success post incarceration?

In this section, we examine recidivism rates of women who participated in programming compared to those who did not. Women who participated in one or more programs of any type, as well as life skills programs, educational programs, and vocational programs were re-arrested significantly less often than women who did not participate in these programs. They also had significantly lower rates of subsequent offending overall. Those who participated in vocational programs had lower rates of subsequent adjudications and convictions relative to those who did not participate in vocational programs. Participation in one or more substance abuse programs and mental health/cognitive programs was not significantly related to any of the recidivism measures. Further, we found no relationship between participation in one or more programs and subsequent incarceration.

Table 4.8. Recidivism by program participation

	Participated in any program		Participated in Life skills		Participated in Substance abuse		Participated in Education		Participated in Vocational		Participated mental health/ cognitive	
	Yes	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**	**Yes**	**No**
Arrests	56%	67%*	55%	66%*	58%	60%	45%	62%**	38%	61%**	53%	60%
Adjudications	26%	30%	26%	29%	19%	29%	17%	29%	9%	29%*	20%	28%
Convictions	24%	27%	24%	27%	19%	27%	16%	27%	9%	26%*	20%	26%
Imprisonment (any)	39%	38%	38%	40%	45%	38%	38%	39%	34%	39%	40%	39%
Imprisonment, no PVs	14%	19%	13%	20%	11%	17%	16%	16%	6%	16%	10%	16%
Subsequent of any type	64%	74%*	64%	73%*	68%	67%	53%	69%*	50%	69%*	58%	68%
N	292	134	255	171	80	346	58	368	32	394	40	386

*p≤.05, **p≤.01

Next, we examined the average number of programs women participated in and completed by recidivism to determine whether there was an additive effect concerning program participation. These results are displayed in Table 4.9 below. We found that women who re-offended (as measured by all types of recidivism except re-incarcerations for any offense) participated in and completed significantly fewer programs than women who did not recidivate. This suggests that there may be an additive effect. That is, women who participate in a greater number of programs and/or complete a greater number of programs benefit from increased program participation. However, it is possible that women who participate in more programs are different in some way from women who participate in fewer programs, which in turn, influences recidivism.

Table 4.9. Number of programs participated in and recidivism

	# of programs participated in		# programs completed	
	No subsequent offense	Subsequent offense	No subsequent offense	Subsequent offense
Arrests	1.302 (1.155) 172	.992** (1.037) 254	1.134 (1.053) 172	.854** (.919) 254
Adjudications	1.207 (1.116) 310	.879** (.846) 116	1.039 (1.045) 310	.776** (.770) 116
Convictions	1.191 (1.16) 319	.897** (.857) 107	1.025 (1.037) 319	.794* (.786) 107
Incarcerations (any)	1.11 (1.11) 260	1.13 (1.08) 166	.984 (1.02) 260	.940 (.932) 166
Incarcerations, no PVs	1.16 (1.13) 360	.864* (.857) 66	1.02 (1.02) 360	.697* (.701) 66
Subsequent of any type	1.307 (1.169) 140	1.025** (1.048) 286	1.143 (1.08) 140	.881** (.921) 286

*p≤.05, **p≤.01

Does recidivism vary by risk level and program participation?

Based on prior research and suggestions for best practices regarding prison programming, we explored whether the interaction between risk level and program participation are related to recidivism. We expect that women whose risk level was medium to high and who participate in programming would be less likely to recidivate. Further, the literature suggests that offenders who are low risk may not need programming and that in fact, programming may be detrimental to them. Thus, we explore whether women who were low risk and participated in programming were more likely to recidivate.

We found no support for the idea that program participation for women assessed as low risk was detrimental, and indeed, found exactly the opposite. Women who participated in programming while incarcerated and were low risk were *less* likely to recidivate as measured by everything except subsequent incarcerations for any offense (new offense and/or parole violations). Further, these differences were statistically significant for adjudications, convictions, and incarcerations for new offenses. On the other hand, we found no significant differences between program participation and recidivism by any measure for women assessed as medium risk or higher, though generally women who participated in programming were less likely to recidivate.

Table 4.10. Recidivism by program participation and risk level

	Low risk		Medium risk		High risk		Extreme risk	
	No program	Program	No program	Program	No program	Program	No program	Program
Any offense	64%	45%	73%	67%	78%	77%	81%	94%
Arrests	59%	39%	63%	58%	71%	71%	77%	81%
Adjudications	32%	7%**	30%	26%	33%	48%	77%	56%
Convictions	32%	6%**	28%	25%	29%	45%	19%	38%
Incarcerations	27%	28%	43%	38%	38%	52%	42%	63%
Incarcerations, no PVs	18%	4%*	23%	13%	18%	27%	15%	25%
N	22	85	40	128	45	62	26	16

*p≤.05, **p≤.01

Next, we examined re-offending by risk level and program type. Among women designated as low risk, those who participated in life skills programs were significantly less likely to recidivate than women who did not participate in life skills programs. Further, women who were medium risk re-offended less often if they participated in either vocational or educational programs. We found no statistically significant differences in recidivism rates by risk level for those who participated in substance abuse or mental health/cognitive programming.

Table 4.11. Any recidivism by program type and risk level

	Low risk (N=107)		Medium risk (N=168)		High risk (N=107)		Extreme risk (N=36)	
	No program	Program	No program	Program	No program	Program	No program	Program
Life skills*	64%	43%*	67%	69%	79%	77%	83%	92%
Vocational*	48%	53%	70%	40%*	78%	50%	85%	100%
Educational*	50%	44%	72%	44%**	80%	64%	84%	100%
Substance abuse	44%	59%	70%	64%	75%	93%	85%	100%
Mental health/ cognitive	49%	46%	69%	68%	78%	80%	78%	80%

*p≤.05, **p≤.01

Needs, program participation, and recidivism

In this section, we explore the relationship between criminogenic needs, participation in programming related to those needs, and recidivism. We expect that women who participate in programming related to their criminogenic needs will be less likely to recidivate than those who do not participate in programming related to their needs. We display the results in Table 4.11 below. Recall that the needs assessment ranges from 0 (no current problem) to 5 (extreme). We first assessed recidivism among women who participated in one or more programs related to a need assessed as 3 (moderate) or higher

(results are displayed in the first column). We found that, with the exception of incarcerations for any offense, women who participated in at least one program related to their needs were less likely to recidivate. These differences were significant, however, only for incarcerations for a new offense. We also examined whether the level of need mattered. We compared recidivism rates among women who participated in a program related to a need of at least 1 (mild) to those who did not (column 2). We found that the rates were similar to those for women who had a need level of at least 3, but none of the differences were statistically significant.

Table 4.12. Level of need, program participation, and recidivism

	Participated in at least one program related to needs (GT3)		Participated in at least one program related to needs (GT1)	
	No	**Yes**	**No**	**Yes**
Arrests	61%	54%	60%	59%
Adjudications	28%	21%	29%	25%
Convictions	26%	20%	27%	23%
Incarcerations	38%	46%	39%	39%
Incarcerations, no PVs	17%	7%*	17%	14%
Any subsequent	67%	66%	67%	67%
N	365	61	258	168

*p≤.05

Multivariate analyses results: assessing subsequent offending

The analyses above suggest there are a number of characteristics associated with one or more measures of recidivism. In order to assess which characteristics are most strongly associated with increased recidivism, we computed multiple multivariate logistic regressions. We estimated five models for each subsequent offending type. Like the analyses of program utilization, we computed a series of nested models for each and included those variables that were of theoretical import or were associated with recidivism in the bivariate analyses.

Subsequent arrests

Two demographic variables, race and age, were significantly related to subsequent arrests. White women were much less likely to be re-arrested than non-white women; this relationship held with the inclusion of each additional set of variables. Older women were less likely to be re-arrested; however, once variables related to risk and needs were included in the analysis (Model 4), that relationship was no longer statistically significant. Model 2 introduced criminal history variables. One of these, number

of prior offenses, was positively and significantly related to subsequent arrests.[4] This relationship was maintained with the addition of subsequent blocks of variables. Criminal justice system-related variables were introduced in Model 3 but were not statistically significant. Model 4 introduced risk and needs variables. Women assessed as medium, high, or extreme risk were all more likely to be re-arrested than women who were assessed as low risk (the comparison category). However, only women assessed as extreme risk were significantly more likely to be re-arrested. This was no longer significant once program participation was introduced in Model 5. Program participation was not significantly related to re-arrest when controlling for other variables. Further, the introduction of criminal justice system-related variables, risks and needs, and program participation did not significantly improve the model, indicating that prior offenses along with demographic variables were the best predictors of subsequent arrests.

Table 4.13. Logistic regression results for subsequent arrests

		Subsequent arrests (N=378)				
Block	**Variable**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Demographics	White	.550**	.580**	.557*	.550*	.554*
	Married	.670	.883	.923	.931	.933
	Age at intake	.972*	.973**	.971*	.984	.984
Criminal history	Total prior offenses		1.326***	1.311***	1.294***	1.293***
	Current drug offense		1.346	1.381	1.438	1.449
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			.767	.877	.892
Criminogenic needs and risk	Total average need score				1.036	1.047
	Medium risk				1.099	1.110
	High risk				1.843	1.822
	Extreme risk				2.760*	2.651
Program participation	Any program					.877
	Constant	5.035	1.483	2.256	.982	1.024
	-2LL	519.574	472.777***	469.519	462.706	462.477

*p≤.05, **p≤.01, ***p≤ .001

[4] We opted to use total prior offenses as a summary measure of prior offending as it encapsulates all of the other prior offense types (e.g., prior arrests, prior adjudications, prior incarcerations) and provides a measure of severity of prior offending.

Subsequent adjudications and convictions

Next we examined subsequent adjudications and convictions; the results of the analyses of subsequent adjudications are displayed in Table 4.14 below. None of the demographic variables were statistically significant initially. The addition of the criminal history variables in Model 2 significantly improved the model fit (χ^2=20.203, df=2) and both were positive and significantly related to adjudications. That is, the odds of adjudication increased for women who had a greater number of prior offenses and for those with a current drug offense. We introduced criminal justice system-related variables in Model 3; one of these, release type, was statistically significant. Women who were required to be supervised by the Probation/Parole Department after release were less likely to be re-adjudicated. Length of incarceration, though, was not significant.

There was a marginally significant improvement in model fit with the introduction of risk and needs scores (Model 4). Each category of risk was positively related to re-adjudication though only one was statistically significant. Women assessed as medium risk were about 3.5 times more likely to be re-adjudicated compared to women assessed as low risk. Average level of criminogenic need, however, was not statistically significant. The addition of the program variable in Model 5 did not improve the fit of the model nor was the variable statistically significant. This indicates that program participation overall has no impact on subsequent adjudications, once other variables are accounted for in the model.

We also computed these models with subsequent conviction as the outcome variable. The results mirrored those reported for subsequent adjudications, with the exception of the variable "current drug offense." Women with a current drug offense were no more likely to be re-convicted than women without a current drug offense. The table is available in Appendix D for interested readers.

Table 4.14. Logistic regression results for subsequent adjudications

Block	Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Demographics	White	.612	.671	.632	.632	.624
	Married	1.128	1.477	1.662	1.749	1.753
	Age at intake	.974	.974	.967*	.985	.985
Criminal history	Total prior offenses		1.147***	1.138***	1.122**	1.125**
	Current drug offense		1.797**	1.735*	1.945**	1.936**
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			.363***	.405***	.397***
Criminogenic needs and risk	Total average need score				.852	.841
	Medium risk				1.808	1.782
	High risk				3.502**	3.536**
	Extreme risk				1.887	1.965
Program participation	Any program					1.174
	Constant	.984	.403	1.118	.331	.313
	-2LL	457.591	437.388***	421.208**	409.815*	409.496

*p≤.05, **p≤.01, ***p≤ .001

Subsequent incarcerations

Finally, we explored subsequent incarcerations for any reason as well as re-incarcerations for new offenses only. We begin with subsequent incarcerations for any reason; the results are shown in Table 4.15. None of the demographic variables were statistically significant. The addition of criminal history variables in Model 2 significant improved the model (χ^2=25.539, df=2), due to the statistically significant relationship between prior offenses and subsequent incarcerations. The odds ratio for prior offenses indicates that for every one-unit increase in prior offending, the odds of re-incarceration increases by about 1.2 times.

Model 3 added criminal justice system-related variables, which significantly improved the model fit. Women who were supervised were about twice as likely to be re-incarcerated as women who were not supervised after release. We added risk and needs scores in Model 4. Contrary to what might be expected, women with greater needs were less likely to be re-incarcerated. For every one-unit increase in the needs score, the odds of re-incarceration decreased by 0.683. Risk, however, was not significantly related to re-incarceration. The addition of the program participation variable in the last model did not improve the overall model fit, and the variable itself was not statistically significant. This indicates that program participation does not influence re-incarceration once other variables are considered.

Table 4.15. Logistic regression results for subsequent incarcerations

Block	Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Demographics	White	.659	.690	.706	.721	.711
	Married	.746	.921	.854	.869	.862
	Age at intake	.977	.979	.982	.991	.990
Criminal history	Total prior offenses		1.198***	1.217***	1.206***	1.209***
	Current drug offense		1.091	1.138	1.219	1.208
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			2.179**	2.435***	2.340***
Criminogenic needs and risk	Total average need score				.683*	.669*
	Medium risk				1.530	1.503
	High risk				1.767	1.822
	Extreme risk				2.268	2.480
Program participation	Any program					1.332
	Constant	1.696	.701	.323	.240	.218
	-2LL	524.645	499.116***	489.360**	479.556*	478.386

*p≤.05, **p≤.01, ***p≤ .001

Below, we present the results for subsequent incarcerations for new offenses only. Like the results for incarcerations generally, none of the demographic variables were statistically significant, and women with a greater number of prior offenses were more likely to be re-incarcerated for a new offense. While there was a positive relationship between a current drug offense and re-incarcerations as seen above, this variable is statistically significant when the re-incarceration is for a new offense. That is, women with a drug offense have a significantly greater likelihood of returning to prison for a new offense compared to women whose most serious offense did not involve drugs.

We found the odds of re-incarceration were *lower* for females supervised after release. This is opposite from the findings for re-incarcerations for any reason shown above. This suggests that women who are re-incarcerated are remanded to prison for a violation of parole or probation rather than for a new crime.

We added risk and needs variables in Model 4; this model was a statistically significant improvement over Model 3 (χ^2=13.186, df=4). As we saw above and contrary to expectations, the odds of re-incarceration were significantly lower for women whose needs were greater. However, all of the risk variables were positive, indicating greater odds of re-incarceration relative to those assessed as low risk, though only high risk was statistically significant. We introduced the program participation variable in Model 5; this variable was not statistically significant nor did the addition of the variable improve overall model fit (χ^2=.033, df=2, p>.05). Like the results for the other measures of recidivism, this indicates that

participation in one or more programs does not have a significant deterrent effect on returns to prison for a new crime.

Table 4.16. Logistic regression results for subsequent incarcerations involving new offenses only

Block	Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Demographics	White	.631	.699	.713	.726	.729
	Married	.887	1.184	1.236	1.316	1.317
	Age at intake	.978	.978	.975	.990	.990
Criminal history	Total prior offenses		1.155***	1.158***	1.156***	1.155***
	Current drug offense		1.792*	1.664	1.912*	1.916*
Criminal justice system-related	Length of incarceration			1.000	1.001	1.001
	Supervised post release			.468*	.513*	.517*
Criminogenic needs and risk	Total average need score				.583*	.586*
	Medium risk				2.297	2.309
	High risk				3.551*	3.538*
	Extreme risk				1.626	1.595
Program participation	Any program					.941
	Constant	.452	.168	.263	.121	.050
	-2LL	343.302	327.120***	320.730*	307.544*	307.511

*p≤.05, **p≤.01, ***p≤ .001

Any subsequent offense

Finally, we assessed whether these characteristics affect subsequent offenses generally. Results were similar to what we found with the other measures of recidivism, with some minor differences. First, in Model 1, both age and marital status were statistically significant: older women and married women were less likely to re-offend. However, these did not remain statistically significant when additional variables were added. Consistent with the other measures of recidivism, we found that the number of prior offenses significantly increased the odds of re-offending. For every one-unit increase in prior offenses, the odds of any type of subsequent offense increased by about 1.3 times. The introduction of risk and needs scores in Model 5 was a significant improvement in overall model fit (χ^2=9.905, df=4, p<.05) due to the measures of risk. As seen in prior models, women with higher risk levels had greater odds of recidivism. Program participation was not significantly associated with any subsequent offenses.

Table 4.17. Logistic regression results for any type of recidivism

Block	Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Demographics	White	.648	.701	.670	.683	.687
	Married	.570*	.743	.759	.799	.800
	Age at intake	.972*	.975*	.973*	.989	.990
Criminal history	Total prior offenses		1.397***	1.379***	1.359***	1.358***
	Current drug offense		1.264	1.330	1.403	1.415
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			1.044	1.301	1.324
Criminogenic needs and risk	Total average need score				.997	1.008
	Medium risk				1.479	1.495
	High risk				2.169*	2.146*
	Extreme risk				4.934**	4.711**
Program participation	Any program					.873
	Constant	6.880	1.806	2.203	.673	.701
	-2LL	489.554	437.676***	435.022	425.117*	424.901

*p≤.05, **p≤.01, ***p≤ .001

Summary of multivariate models assessing recidivism

In order to better understand which characteristics are associated with which measures of recidivism, we summarize the results from the final models in Table 4.18 below. Overall, demographic variables did not strongly predict recidivism. The odds of re-arrests were significantly lower for white women, but race was not a significant factor for other measures of recidivism. Age and marital status were not statistically significant in any of the final models.

One of the two measures of criminal history, total prior offenses, was a consistent and significant predictor of recidivism regardless of which recidivism measure was analyzed. That is, women who had a greater number of prior offenses were significantly more likely to be involved with the criminal justice system again. The second measure added in this block, a current drug offense was a significant predictor only for adjudications and incarcerations for a new offense. This may indicate that women with a current drug offense were more likely to commit a new crime than women whose most serious offense did not involve drugs.

The third block of variables added length of incarceration and post-release supervision status. Length of incarceration was not significantly associated with any of the recidivism measures, but supervision post release was a significant predictor of several measures of recidivism. The odds of re-adjudication, re-conviction, and re-incarceration for a new crime were significantly lower for women who were

supervised. Conversely, the odds of re-incarceration for any type of offense significantly increased for women who were supervised. Since this measure of recidivism includes returns to prison for both new crimes as well as parole violations, we expect this finding is a reflection of returns to prison for parole violations.

Risks and needs were related to some measures of recidivism. Offenders with higher average needs were less likely to be re-incarcerated for either a new offense or any offense. It is not immediately clear why this is the case. Relative to those assessed as low risk, women who were assessed as high risk were more significantly more likely to be re-adjudicated, re-convicted, and re-incarcerated for a new offense and were more likely to re-offend overall. Further, women assessed as extreme risk were significantly more likely to re-offend in general.

Program participation, the last variable included in each of the models, was not statistically significant when measuring any type of recidivism. That is, program participation overall does not appear to be related to recidivism once other variables are considered. This is a key finding from this study, as we expected that women who participate in one or more programs would be less likely to re-offend. While not shown here, we also ran the models using total number of programs rather than the dichotomous program participation/no program participation shown here. We found the same results, indicating that once other variables are accounted for, participating in a greater number of programs does not decrease the odds of recidivism.

Table 4.18. Logistic regression results: summary of final models of recidivism

Model	Variable	Arrests	Adjudications	Convictions	Incarcerations	Incarcerations, no PVs	Any
Demographics	White	.554*	.624	.590	.711	.729	.687
	Married	.933	1.753	1.660	.862	1.317	.800
	Age at intake	.984	.985	.990	.990	.990	.990
Criminal history	Total prior offenses	1.293***	1.125**	1.107**	1.209***	1.155***	1.358***
	Current drug offense	1.449	1.936**	.379	1.208	1.916*	1.415
Criminal justice system-related	Length of incarceration	1.000	1.000	1.000	1.000	1.001	1.000
	Supervised post release	.892	.397***	.369***	2.340***	.517*	1.324
Criminogenic needs and risk	Total average need score	1.047	.841	.781	.669*	.586*	1.008
	Medium risk	1.110	1.782	1.782	1.503	2.309	1.495
	High risk	1.822	3.536**	3.003**	1.822	3.538*	2.146*
	Extreme risk	2.651	1.965	1.611	2.480	1.595	4.711**
Program participation	Any program	.877	1.174	1.237	1.332	.941	.873
	Constant	1.024	.313	.404	.218	.050	.701
	-2LL	462.477	409.496	400.117	478.386	307.511	424.901

*p≤.05, **p≤.01, ***p≤ .001

Program-specific participation and subsequent offending

Besides analyzing recidivism by program participation overall, we also assessed recidivism by program type. Only one type of program—educational programming—was significantly related to recidivism. We present those findings below (the results for the other program-specific models are available in Appendix E). Like the multivariate analyses above, we calculated multiple models. However, there are some differences. Specifically, we limited the needs type and program type to education. In addition, due to the small number of cases for other measures, we opted only to examine one type of recidivism outcome: any subsequent offending.

While marital status and age were significantly related to recidivism in Model 1 (and up to Model 3 for age), once other variables were included, these differences were no longer statistically significant. As we saw in the models above, however, prior offending consistently and significantly predicted subsequent offending. That is, those with a greater number of prior offenses had greater odds of re-offending. In addition, women whose assessed risk level was high or extreme were significantly more likely than women assessed as low risk to re-offend. Importantly, controlling for all other variables in the model, the odds of re-offending were significantly lower for women who participated in educational programming.

Table 4.19. Logistic regression results: Recidivism by education program participation

Subsequent offenses of any type with education program participation (N=398)						
Block	**Variable**	**Model 1**	**Model 2**	**Model 3**	**Model 4**	**Model 5**
Demographics	White	.648	.701	.670	.686	.708
	Married	.570*	.743	.759	.800	.841
	Age at intake	.972*	.973*	.973*	.990	.986
Criminal history	Total prior offenses		1.397***	1.379***	1.360***	1.368***
	Current drug offense		1.264	1.330	1.404	1.427
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			1.044	1.300	1.318
Criminogenic needs and risk	Education need score				1.019	1.016
	Medium risk				1.480	1.521
	High risk				2.181*	2.229*
	Extreme risk				4.953**	4.886**
Program participation	Any education program					.487*
	Constant	6.880	1.806	2.203	.632	.699
	-2LL	489.554	437.676***	435.022	425.117*	420.692*

*p≤.05, **p≤.01, ***p≤ .001

Section 5: Discussion

There were two primary purposes for this study. The first was to explore the factors associated with prison program utilization among incarcerated women. We were especially interested in whether program participation was related to criminogenic needs and risk levels and whether this varied by program type (life skills, vocational, education, substance abuse, mental health/cognitive, and programming of any type). The second purpose was to assess whether program participation was associated with reduced recidivism, utilizing various measures of subsequent offending (arrest, adjudication, conviction, incarceration for any offense, or incarceration for a new offense) after controlling for relevant factors.

Program participation

We found that the majority of women participated in prison programming during their period of incarceration. Most women participated in just one program, but a few participated in up to ten. Most often, women participated in life skills (Recidivism Reduction Program) followed distantly by one or more substance abuse programs.

Demographic characteristics

There was some relationship between demographic variables and program participation. We found that the odds of white women participating in programming were higher than for non-white women. However, this was statistically significant for vocational programs only. Younger women were significantly more likely to participate in educational programming. This is consistent with other studies that find younger inmates participate more often in educational programming (Chamberlain, 2012; Petersilia, 1979), though Rose and Rose (2014) found this only for male inmates. Otherwise, we found that demographic variables were not strongly related to program participation, particularly once other variables were taken into account.

Criminal history

We did find, though, that prior incarceration had an inverse relationship with prison programming both overall and for life skills programming. That is, the odds of participating in life skills or any type of programming decreased if the woman was previously incarcerated. Although this variable was related to all types of programming when examined in the bivariate, once other variables were accounted for, that relationship was no longer significant. This contradicts most prior studies that find that a more significant criminal history is associated with greater program participation (Belenko and Houser, 2012; Chamberlain, 2012). It is possible, though, that women who were incarcerated previously already participated in prison programs during prior stays and therefore did not participate during the stay resulting in the 2009 release.

Confinement-related variables

Consistent with prior research (Chamberlain, 2012), we found that women who were incarcerated for a longer period of time were more likely to participate in prison programming. Interestingly, though, this was not the case for women who participated in life skills programming, which almost exclusively consisted of the Recidivism Reduction Program. We expect this may reflect access to programming. For

most programs, women must have a minimum length of time left in order to participate. Additionally, many programs require at least six months of clear prison conduct before inmates are eligible to participate in programming. The Recidivism Reduction Program, though, requires that women have no more than one year to serve. Most women completed the program immediately before release from prison. Consequently, length of incarceration would not interfere with participation in this program the way it does with other types of programs.

While we found some relationship between initial classification level and program utilization in the bivariate, once we analyzed this in multivariate models, we did not find evidence that access to programming was limited by classification level. Thus, while the length of time served played a role in program utilization, women were not limited by their prison classification level. It is important to point out that in practice, there is little difference in the housing of women based on classification levels I to III. These women are housed together, and the lines between levels are not as distinct as they are for men. This may account for the lack of significant findings by classification levels.

Prison staff recommendations

Prison staff recommended at least one program for nearly all of the women. We found that women with a greater number of program recommendations were more likely to participate in one or more programs. It is possible that prison staff recommend more programs for inmates with greater needs. Indeed, the correlation between recommendations and overall needs was significant, though relatively small (r=.149). However, our overall needs measure excludes an important area: assessed mental health needs. The literature indicates that incarcerated females often suffer from mental health problems (Bloom, 2004; Davis, 2004), so it is likely that the correlation may be higher if mental health needs were included.

Nonetheless, we found little relationship between specific recommendations and participation in related programs, with one important exception. The odds of participating in educational programming were higher when prison staff recommended it. Further, we found that prison staff recommended educational programming for women who had significantly higher educational needs. However, we did not find any significant relationship between recommendations and participation in life skills, vocational, substance abuse, or mental health/cognitive programming once other factors were accounted for in the multivariate models.

Risk and criminogenic needs

We expected that program participation would be related to both community risk level and criminogenic needs. We found that the odds of participating in life skills programming were higher for those with higher needs in that area. However, we found that very few women had life skills needs and nearly all women participated in life skills programs, so we are hesitant to assert that there is a true match between life skills needs and related program participation. We did not find a relationship between level of need and any other specific program type once we accounted for other factors in the multivariate analyses. We did find, however, that women with greater criminogenic needs overall were significantly more likely to participate in at least one program while incarcerated. This suggests that

there may be some additive effect: the higher the overall need, the more likely someone is to participate in programming. However, program utilization may not be strongly tied to each woman's specific needs.

Program participation also varied with community risk level. Best practices indicate that, in addition to matching individuals' criminogenic needs, that programming should target offenders assessed as medium to high risk. Both the bivariate and multivariate analyses indicate that women assessed as low or medium risk are equally likely to participate in programming. Moreover, we found a few significant differences between women assessed at greater risk levels and their utilization of programming while incarcerated. Women assessed as an extreme risk were much less likely to participate in any program while incarcerated, as well as substance abuse and life skills programs, relative to women assessed as low risk. Women assessed as high risk were less likely to participate in vocational training compared to women assessed as low risk. These findings suggest that women who pose a greater risk to the community are less likely to participate in certain types of programs (i.e., substance abuse, life skills, vocational training) as well as programming overall, while women who are low or medium risk are equally likely to participate in programs. If best practices were followed, we would expect to see significant differences between those assessed as low risk compared to medium and high risk; this occurs only for vocational programming and only for women assessed as high risk.

Summary of findings regarding program utilization

Generally, these results indicate that the factors that influence program utilization vary by program type. However, though not always statistically significant, it is notable that prior incarcerations consistently have a negative relationship with program participation and that length of incarceration has a positive relationship with program participation (except life skills). This suggests that a combination of prior and current prison confinement factors may be influential in determining program participation. These may reflect practical concerns. For example, if a woman participated in programming during a prior prison stay, she may be less likely to participate again. Further, women who are incarcerated for a longer period of time have a greater window of opportunity to participate in programming. It is also plausible, though, that inmates with limited prior prison experiences are more amenable to treatment and therefore will access it at greater rates. Indeed, Jackson and Innes (2000) found that inmates with a less extensive prison history, fewer pro-criminal values, and who were less aggressive had a more positive attitude towards rehabilitation. Inmates who are less aggressive may also be less likely to be sanctioned while incarcerated and therefore more likely to access and remain in programming.

We also found that staff recommendations and criminogenic needs played a role in program utilization generally. Specifically, the greater the number of recommendations and the greater the overall criminogenic need level, the more likely women were to participate in some prison program. Importantly, though, when matching recommendations and needs with program type, we generally did not find a significant relationship. One important exception was educational programming. Here we found that women recommended for educational programming were significantly more likely to participate in it.

Recidivism

The second purpose of this study was to explore recidivism. We chose to examine multiple measures of recidivism, as different outcomes provide a more complete picture of post-release success. We found that most women did recidivate in some way over the four-year follow-up period. Most frequently, they were re-arrested. While almost 40% were re-incarcerated, just 16% were re-incarcerated for a new crime only, indicating that most returns to prison involved at least one parole violation. About one-quarter of the women were re-adjudicated or re-convicted for a felony-level district court case. These also provide a measure of new crimes.

Characteristics associated with recidivism

We found that once we accounted for other variables in the multivariate models, demographic variables had little influence on recidivism. The one exception was that white women were significantly less likely to be re-arrested than non-white women. Marital status and age, though significant in bivariate analyses, were not significant in the multivariate analyses.

We found that criminal history was a consistent predictor of recidivism, regardless of which measure we used. Women with a more extensive prior offending history were more likely to recidivate. Women whose current offense was a drug offense were more likely to be re-adjudicated and more likely to be re-incarcerated for a new offense. However, current drug offense was not a significant predictor of other recidivism measures in the multivariate models.

Women who had greater criminogenic needs overall were less likely to return to prison (either for any reason or for a new offense only) but there was no difference for any of the other recidivism measures. We found these results in both bivariate and multivariate models. It is possible that some women with greater needs are engaged in community treatment or are diverted into programs in lieu of prison. However, future research would be necessary to understand why women with greater needs are less likely to be re-incarcerated.

Women's risk scores were related to those measures that reflect the commission of new offenses: adjudications, convictions, and re-incarcerations for new crimes. Specifically, women deemed a high risk were significantly more likely to recidivate in these ways. Moreover, women who were either high risk or extreme risk were significantly more likely to engage in any subsequent offending compared to women assessed as low risk. While not statistically significant, across all measures of recidivism, the odds of recidivism were greater for women assessed as medium, high, or extreme risk relative to women assessed as low risk.

Program participation and recidivism

Our primary interest for exploring recidivism, though, was whether program participation influences recidivism. In the bivariate analyses, we found re-arrest rates and re-offending overall were lower among women who participated in one or more programs (of any type). That relationship, though, did not hold in the multivariate models. Thus, participation in one or more programs was not significantly related to recidivism once other variables were considered.

Further, in the bivariate models we found that as the number of programs women participated in increased, recidivism decreased for every type of recidivism measure except re-incarceration. While not displayed in the results, we completed the multivariate analyses using total number of programs rather than the dichotomous program-participation variable. We did not find an overall program effect using this variable. This indicates that once other factors are accounted for, there is no independent effect of increased program participation on recidivism.

We also examined recidivism by participation in particular types of programs. The bivariate analyses suggested that women who participated in life skills programs, educational programs, or vocational programs were less likely to be re-arrested or to have any subsequent offenses. Further, women who participated in vocational programs were less likely to be re-adjudicated or re-convicted. However, once we controlled for other variables in the multivariate models, only participation in educational programming was associated with reduced recidivism. This implies that once other factors are considered, participation in most program types is not associated with reduced recidivism. However, it is important to note that relatively few women participated in vocational programs, so it is possible that there was not enough statistical power to find a significant difference.

Policy implications

While we found that participation in one or more programs overall was not significantly related to any of the recidivism measures, and that there was no significant relationship between participation in most programs and recidivism, this does *not* indicate that programming is irrelevant. Indeed, we did find that educational programming was related to decreased re-offending. Furthermore, we found prison staff recommended educational programming to women who had greater educational needs, and that women were more likely to participate in educational programming when recommended. Investment in education programs appears to be an important and perhaps cost-effective way to reduce recidivism, particularly as it may serve to prevent new offenses.

Beyond that, though, these findings illustrate the importance of appropriate program utilization and its impact on recidivism. In fact, matching programming to criminogenic needs and promoting appropriate program utilization may decrease future offending. It is important to point out that educational programming is mandated for certain individuals. Per policy and statute, women housed at Level III or higher who do not have a high school diploma or GED must participate in ABE, though there are some exemptions (NM Statute 33-11-3). It is likely that the relatively strong relationship we found between educational needs, recommendations, and program utilization is in part due to this statutory requirement.

We saw different results for women with other criminogenic needs. For example, nearly all of the women were assessed as having some level of substance abuse-related need, though those who were recommended for a substance abuse program had significantly higher needs in this area. This did not translate, however, to program participation. Once other variables were considered, staff recommendations were not a statistically significant predictor of substance abuse program participation. Further, women who participated in substance abuse programs were not necessarily

those who had the most significant substance abuse needs. We also found no significant differences in recidivism by substance abuse program participation in the multivariate analysis. The implication is that it is crucial to formally and systematically match needs with programs, and strongly encourage women to participate in programs that address those needs.

A second important finding involves the inmate's risk. At least in 2009, prison staff making recommendations about programs would have been aware of the risk an inmate posed within the facility, but may not have been aware of her risk of recidivism. While there is a relationship between these risks, the correlation is not high (r=.016). Best practices make clear that programming should be targeted to offenders who pose a medium to high risk of recidivism and should reflect their criminogenic needs (e.g., Burke, et al., 2010; Serin, 2005). The current analyses suggest, however, that if not beneficial to women of other risk levels, programming is not likely to be detrimental to their post-release success. Of particular concern is the notion that offenders who are low-risk may be more likely to recidivate if they participate in programming. We find no support for that thesis here, and indeed, in every multivariate model we found that women who were higher risk were equally or more likely to recidivate than women deemed low risk even after program participation was measured.

However, the bivariate analyses suggest this may vary by program type. For example, women who were low risk seemed to benefit most from participation in life skills programs while women who were medium risk appeared to benefit most from vocational or educational programming. Future studies with larger sample sizes could explore this in more depth. Based on these analyses, it appears that meeting the criminogenic needs of the women through appropriate programming is more important than considerations of recidivism risk level, at least as far as in-prison programs are concerned. Nevertheless, until future studies with larger sample sizes explore this in more depth and are able to control for any post-release treatment, we would still promote targeting women who are medium to high risk for most programs. However, NMCD staff should carefully consider exceptions to this general guide. The Recidivism Reduction program, for example, may be more beneficial to women who pose a low recidivism risk.

Limitations

There are some limitations to this study. First, effective programming should match the risks and criminogenic needs of an individual. Both overall risk and need scores, though, are dynamic. We chose to use the needs assessment that was both closest to prison admission and most complete. The community risk assessment that we chose was the one closest to the woman's release from prison. We know that needs and dynamic risk elements may change. Even static risk scores can change. For example, women may have needs and/or risks that staff did not initially identify for any number of reasons. Thus, our analysis assessing the relationship between criminogenic needs, risks, program participation, and recidivism is not perfect.

Importantly, there is not a space on the needs assessment form to indicate mental health needs; listed at the top is "mental health severity code," but there is no line next to it to write a score, nor do prison staff typically record a corresponding score (though there are exceptions). Female offenders often have

mental health needs (Bloom and Covington, 2008; Davis and Pacchiana, 2004), and we know that the classification committee assesses those needs; however, these needs are not recorded on the needs assessment form. This is a limitation of this study, then, because we were not able to use this standardized assessment form to determine mental health needs and were unable to assess the degree to which mental health needs were associated with program utilization.

We expect that programming is most effective when the offender is motivated and responsive to change. This study does not control for the motivation of the women who participated in programming. This can influences the overall effectiveness of the program in reducing recidivism. Interestingly, though, prior research on educational programs (Steurer and Smith, 2003) found that motivation did not predict recidivism even though those who participated in the program were more motivated. This suggests that inmates who are more receptive and motivated to change may be those individuals who participate in programs. Despite this, future research should include a measure of motivation to determine whether women who participate in prison programming, and particular types of programs, are more motivated and receptive to change than women who do not participate.

Other components of effective programming include dosage, fidelity to the program model, and access to programs. Dosage can be an important component of success. For instance, the Therapeutic Communities (TC) model is widely used in our nation's prisons and has been found to be an effective substance abuse treatment program (Belenko, Houser, and Welsh, 2012). However, the length of treatment may influence success. In their review of TC, Seiter and Kadela (2003) found that participation in TC for 9-12 months is the optimal time for success. We were unable to systematically control for dosage in this study due to missing data for program dates.

Programs are expected to be most effective if they are implemented in the way that they are intended. This is important; one possible reason for the general failure to find program effects on recidivism in this study could be due to implementation problems. Prior research indicates that at least for some prison programs in New Mexico, fidelity to the model has been difficult to achieve (Legislative Finance Committee, 2012; Willits et al., 2009). Further, women must be able to attend programs consistently. Lockdowns or disciplinary action may disrupt program participation; we were not able to control for that here.

Another limitation of this study is that we may not have captured all program participation. The prison hard-copy records consistently include documentation of programs associated with lump sum awards or earned credit. Records of other programs, such as faith-based programs, may not be consistently recorded in the hard-copy files. It is unknown to what extent those programs may impact post-release success.

Whether women complete a program may influence recidivism. We chose to analyze recidivism by program engagement rather than program completion because we were not confident that we could accurately determine program completion. It is possible that women who complete programs fare better than women who do not.

Ideally, individuals reentering society will have post-prison programming and support to address their specific needs. We do not have data to indicate whether and to what extent the women in this study received any post-incarceration services, which we would expect to play a role in their successful reintegration. Prior research suggests that some programs are associated with better recidivism outcomes when a post-prison component is included (Belenko, Houser, and Welsh, 2012; Wexler, Melnick, and Cao, 2004).

Finally, our purpose was to better understand program participation and the influence of program participation on the recidivism outcomes among female inmates only. We chose to focus on females because of the steady increase in the female prison population. It is unknown, then, to what extent these same conclusions are relevant to male inmates. For instance, because all women are housed at a single facility, the differences in classification levels may be less pronounced than for men. Thus, if we conducted the analyses with male inmates, we may see that classification level does influence program engagement. Further, we included only women who were released from prison in 2009. Many changes have occurred within the NMCD since that time. This study, then, should be considered a baseline against which future analyses can be gauged. Lastly, the sample size was too small to assess the relationship between participation in particular programs and each of the outcome measures, particularly for certain types of programs (e.g., vocational). Though we were able to assess recidivism overall, there may be important differences by types of recidivism, particularly new offenses only as opposed to any offense including parole violations.

Future analyses and conclusions

Future analyses should include subsequent cohorts to assess whether changes have occurred over time, as well as allow for a larger sample size. We were somewhat limited in some of the analyses by sample size, particularly when we examined recidivism by program type. A larger sample size would allow more statistical power to detect differences in types of recidivism by program type. Further, we opted to group multiple programs into categories. Some programs within a given category may be more effective than others. For example, the women in this study who participated in substance abuse could have accessed TC, RDAP, or some other substance abuse treatment like AA. However, there were so few women in each individual program that we chose to group them together. By doing so, we may have masked the effectiveness of a particular program. Future research with larger samples could address this.

Future research may also include other outcome measures. We assessed only whether each ex-inmate recidivated. We did not include time to recidivism. It is possible that programming has a deterrent effect in the short-term that we do not capture by using this longer follow-up period. Additionally, there is likely a time-frame during which women are more likely to recidivate that may vary by program participation type. This information could be used by probation/parole officers to proactively craft interventions during this high-risk period. Additionally, recidivism is not the only measure of post-incarceration success. Future research should address other factors associated with successful reintegration such as employment and abstaining from substance abuse.

Despite the limitations of this study, the results have important implications for prison programming for female inmates within the New Mexico Corrections Department. Perhaps most striking is that this research underscores the importance of ensuring that prison programming is matched with the criminogenic needs of female offenders. Also notable is the finding that prison program participation among women deemed low-risk for recidivism is not likely to be detrimental to them, contrary to some literature. Instead, women who are both low-risk and who participate in programs may be less likely to commit new crimes. This should be interpreted cautiously, though, as it may vary by program type.

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Appendix A: Comparison of sample and prior/post release cohort characteristics

Table A.1. Demographic characteristics

	2009	Other release years (2006-2008; 2010-2012)
Age		
Mean (s.d.)	34 (8.6)	34 (8.8)
N	436	2571
Categorical Age		
18 to 25 years	17%	17%
26 to 30 years	23%	22%
31 to 35 years	20%	20%
36 to 40 years	16%	16%
41 to 45 years	15%	13%
46 through highest age	10%	12%
N	436	2571
Race		
Asian/Pacific Islander	<1%	<1%
Black	7%	7%
Native American	8%	8%
Hispanic	57%	53%
White	28%	30%
Unknown	0%	1%
N	435	2648
Marital Status		
Divorced	22%	21%
Married/Common Law	21%	21%
Never Married	46%	44%
Separated	8%	7%
Unknown/Missing	1%	4%
Widowed	2%	4%
N	436	2648

Table A.2. Current offense and prison stay characteristics

	2009	Other release years (2006-2008; 2010-2012)
Most Serious Current Offense		
Violent	24%	23%
Property	25%	30%
Drugs	40%	37%
DWI	7%	5%
Other	5%	4%
N	422	2591
Intake Reason		
New Admissions	54%	57%
Parole/Probation Violations	33%	31%
Return Admissions	13%	12%
Other	<1%	<1%
N	435	2646
Sentence Length (in days)		
Mean (s.d.)	1490 (1259)	1648 (12,788)
N	428	2636
Length of incarceration (in days)		
Mean (s.d.)	427 (475)	433 (365)
N	436	2587
Court Location		
First Dist. Court	4%	4%
Second Dist. Court	25%	28%
Third Dist. Court	12%	12%
Fourth Dist. Court	2%	1%
Fifth Dist. Court	17%	15%
Sixth Dist. Court	3%	3%
Seventh Dist. Court	3%	3%
Eighth Dist. Court	1%	1%
Ninth Dist. Court	9%	8%
Tenth Dist. Court	<1%	1%
Eleventh Dist. Court	8%	10%
Twelfth Dist. Court	10%	9%
Thirteenth Dist. Court	3%	3%
Magistrate Court	<1%	<1%
Out-of-State Court	<1%	1%
Missing	2%	<1%
N	435	2648

Table A.3. Release-related characteristics

	2009	Other release years (2006-2008; 2010-2012)
Release Type		
Court Ordered	1%	1%
Discharged	28%	26%
Dual Supervision	4%	3%
Parole/Parole to Center	67%	70%
Probation	1%	<1%
N	435	2648

Appendix B: Rates of program participation, completion, and credit received detailed by program type

Table B.1. Program participation, completion rates, and lump sum credit received

	Participated in program (N=292)		Evidence of completion of program		Received credit (of those who participated)		Received credit based on completion	Average credit received
Program	**N**	**%**	**N**	**%**	**N**	**%**	**%**	**Mean (s.d.)**
Life skills	255	87.3	248	97.3	246	96.5	99.2	44.5 (17.2) 2-62
Recidivism Reduction	255	87.3	248	97.3	246	96.5%	99.2	44.5 (17.2) 2-62
SOAR	2	0.7%	0	0.0	n/a			n/a
Parenting	3	1.0%	0	0.0	n/a			n/a
Vocational	32	11.0%	32	100.0	18	56.3	56.3	31.67 (7.07) 30-60
Introduction to computers	21	7.2%	21	100.0	17	81.0	81.0	30 (0)
CTech	17	5.8%	17	100.0	15	88.2	88.2	30 (0)
Other vocational	3	1.0%	2	66.7	2	66.7	100.0	30 (0)
Education programs	58	19.9%	20	34.5	13	22.4	65.0	87.7 (19.22) 30-120
Adult Basic Education	50	17.1%	19	38.0	12	24.0	63.2	85 (17) 30-90
College courses	4	1.4%	1	25.0	1	25.0	100%	120 (0)
Other education	5	1.7%	0	0	n/a			n/a
Substance abuse	80	27.4%	71	88.8	67	83.8	94.4	59.6 (29.52) 7-150
RDAP Phase I	46	15.8%	42	91.3	38	82.6	90.5%	29 (4) 7-30
RDAP Phase II	36	12.3%	35	97.2	35	97.2	100.0	29 (4) 8-32
RDAP Phase III	22	7.5%	21	95.5	21	95.5	100.0	30 (0)
RDAP Phase IV	3	1.0%	3	100.0	2	66.7	66.7	30 (0)
TCU Phase I	25	8.6%	22	88.0	20	80.0	90.9	29 (3) 15-30
TCU Phase II	6	2.1%	5	83.3	5	83.3	100.0	30 (0)
TCU Phase III	4	1.4%	4	100.0	3	75.0	75.0	30 (0)
TCU Phase IV	3	1.0%	2	66.7	2	66.7	100.0	30 (0)
Other substance abuse programs	16	5.5%	11	68.8	9	56.3	81.8	30 (0)
Mental health/cognitive	47	16.1%	41	87.2	40	85.1	97.6	36.8 (22.00) 30-150
MRT	31	10.6%	27	87.1	27	87.1	100.0	30 (0)
Corrective thinking	12	4.1%	12	100.0	11	91.7	91.7	30 (0)
Charting a new course	5	1.7%	5	100.0	5	100.0	100.0	30 (0)
Crossings (religious)	6	2.1%	3	50.0	2	33.3	66.7	90 (0) 90
PB&J Dog program	5	1.7%	0					n/a
Grief and Loss	3	1.0%	0					n/a
Other	3	1.0%	1	33.3	0			n/a
Physical health	1	<1%	0		n/a			n/a

Appendix C: Results of bivariate analyses of program participation

Table C.1. Bivariate summary with program participation, Demographics

		Any Program	Life skills	Vocational	Education	Substance Abuse	Mental health/Cognitive
Age	Participated	34.32 (8.745) N=292	34.75** (8.92) N=255	34.53 (9.221) N=32	31.52* (9.185) N=58	34.44 (7.793) N=80	35.02 (9.284) N=47
	Did not participate	32.90 (8.339) N=134	32.55 (8.04) N=171;	33.81 (8.595) N=394	34.24 (8.50) N=368	33.74 (8.823) N=346	33.73 (8.553) N=379
Race	White, participated	70% N=118	63% N=118	12%* N=118	14% N=118	20% N=118	11% N=118
	Non-white, participated	68% N=308	59% N=308	6% N=308	13% N=308	19% N=308	11% N=308
Marital status	Married, participated	73% N=86	62% N=86	9% N=86	19% N=86	19% N=86	11% N=86
	Not married, participated	67% N=340	59% N=340	7% N=340	12% N=340	19% N=340	11% N=340

*p≤.05, **p≤.01

Table C.2. Bivariate summary with program participation, Criminal justice system-related

		Any Program	Life skills	Vocational	Education	Substance Abuse	Mental health/ Cognitive
Length of incarceration	Participated	514.69*** (475.30) N=292	480.61** (462.01) N=254	1040.03*** (771.481) N=32	782.93*** (614.911) N=58	745.24*** (548.45) N=80	1082.38*** (613.141) N=47
	Did not participate	243.13 (431.02) N=134	355.01 (492.65) N=172	380.35 (409.161) N=394	374.26 (427.919) N=368	356.99 (429.25) N=346	348.98 (389.476) N=379
Total recommendations	Participated	4.02*** (2.09) N=292	3.97*** (2.04) N=255	3.69 (2.46) N=32	4.2* (2.09) N=58	4.00 (2.23) N=80	4.06 (2.20) N=47
	Did not participate	2.92 (2.23) N=134	3.24 (2.35) N=171	3.68 (2.18) N=394	3.6 (2.20) N=368	3.60 (2.18) N=346	3.63 (2.19) N=379

*p≤.05, **p≤.01, ***p≤ .001

Table C.3. Bivariate summary with program participation, Criminal History

		Participated in:					
		Any Program	**Life skills Program**	**Vocational Program**	**Education Program**	**Substance Abuse Program**	**Mental health/ Cognitive Program**
Prior arrests (any)	Has prior arrests	68% N=378	59% N=378	8% N=378	14% N=378	19% N=378	11% N=378
	No prior arrests	71% N=48	67% N=48	6% N=48	10% N=48	17% N=48	15% N=48
Prior non-PV arrests	Has prior non-PV arrests	68% N=362	59% N=362	7% N=362	14% N=362	20% N=362	11% N=362
	No prior non-PV arrests	70% N=64	64% N=64	9% N=64	13% N=64	14% N=64	14% N=64
Prior adjudications	Has prior adjudications	68% N=291	59% N=291	6% N=291	14% N=291	20% N=291	10% N=291
	No prior adjudications	70% N=135	62% N=135	10% N=135	13% N=135	17% N=135	14% N=135
Prior convictions	Has prior convictions	67% N=275	58% N=275	6% N=275	14% N=275	19% N=275	10% N=275
	No prior convictions	71% N=151	64% N=151	11% N=151	14% N=151	18% N=151	13% N=151
Prior incarcerations	Has prior incarcerations	46%*** N=154	41%*** N=154	3%** N=154	6%*** N=154	8%*** N=154	3%*** N=154
	No prior incarcerations	82% N=272	71% N=272	10% N=272	18% N=272	25% N=272	16% N=272
Priors of any type	Has priors of any type	69% N=395	60% N=395	8% N=395	14% N=395	19% N=395	10% N=395
	No priors of any type	68% N=31	65% N=31	7% N=31	10% N=31	19% N=31	19% N=31

*p≤.05, **p≤.01, ***p≤ .001

Table C.4. Bivariate summary with program participation, Current Offense

		Participated in:					
		Any Program	**Life skills Program**	**Vocational Program**	**Education Program**	**Substance Abuse Program**	**Mental Health/ Cognitive Program**
Current violent	Has current violent offense	71% N=97	64% N=97	6% N=97	14% N=97	21% N=97	10% N=97
	No current violent offense	68% N=329	59% N=329	8% N=329	13% N=329	18% N=329	11% N=329
Current property	Has current property offense	58%** N=107	47%** N=107	8% N=107	16% N=107	15% N=107	9% N=107
	No current property offense	72% N=319	64% N=319	7% N=319	13% N=319	20% N=319	12% N=319
Current drug	Has current drug offense	72% N=171	63% N=171	8% N=171	14% N=171	21% N=171	14% N=171
	No current drug offense	66% N=255	58% N=255	7% N=255	13% N=255	17% N=255	9% N=255
Current DWI	Has current DWI offense	76% N=29	72% N=29	3% N=29	3% N=29	17% N=29	3% N=29
	No current DWI offense	68% N=397	59% N=397	8% N=397	14% N=397	19% N=397	12% N=397
Current other	Has current "other" offense	73% N=22	68% N=22	9% N=22	9% N=22	14% N=22	14% N=22
	No current "other" offense	69% N=404	59% N=404	7% N=404	14% N=404	19% N=404	11% N=404

*p≤.05, **p≤.01

Appendix D: Logistic regression results for subsequent convictions

Table D.1. Logistic regression results: subsequent convictions and any program participation

Block	Variable	Model 1	Model 2	Model 3	Model 4	Model 5
Demographics	White	.613	.622	.599	.600	.590
	Married	1.206	1.392	1.589	1.656	1.660
	Age at intake	.976	.984	.975	.990	.990
Criminal history	Total prior offenses		1.121**	1.115**	1.104**	1.107**
	Current drug offense		.313	.373	.382	.379
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			.349***	.380***	.369***
Criminogenic needs and risk	Total average need score				.796	.781
	Medium risk				1.820	1.782
	High risk				2.973**	3.003**
	Extreme risk				1.519	1.611
Program participation	Any program					1.237
	Constant	.824	.395	1.067	.437	.404
	-2LL	439.472	426.152**	409.984***	400.661	400.117

*p≤.05, **p≤.01, ***p≤.001

Appendix E: Logistic regression results for subsequent offending by program type

Table E.1. Logistic regression results: Recidivism by life skills program participation

Block	Variable	Model 1 Exp(B)	Model 2 Exp(B)	Model 3 Exp(B)	Model 4 Exp(B)	Model 5 Exp(B)
Demographics	White	.648	.701	.670	.684	.688
	Married	.570*	.743	.759	.793	.785
	Age at intake	.972*	.973*	.973	.990	.991
Criminal history	Total prior offenses		1.397***	1.379***	1.357***	1.354***
	Current drug offense		1.264	1.330	1.390	1.400
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			1.044	1.307	1.347
Criminogenic needs and risk	Total average need score				1.082	1.098
	Medium risk				1.438	1.484
	High risk				2.194*	2.137*
	Extreme risk				5.002**	4.724**
Program participation	Any life skills program					.833
	Constant	6.880***	1.806	2.203	.624	.661
	-2LL	489.55	437.68***	435.02	424.76*	424.27

*p≤.05, **p≤.01, ***p≤.001

Table E.2. Logistic regression results: Recidivism by vocational program participation

Block	Variable	Model 1 Exp(B)	Model 2 Exp(B)	Model 3 Exp(B)	Model 4 Exp(B)	Model 5 Exp(B)
Demographics	White	.648	.701	.670	.682	.696
	Married	.570*	.743	.759	.798	.795
	Age at intake	.972*	.973*	.973*	.989	.988
Criminal history	Total prior offenses		1.397***	1.379***	1.361***	1.361***
	Current drug offense		1.264	1.330	1.416	1.418
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			1.044	1.294	1.301
Criminogenic needs and risk	Total average need score				.946	.943
	Medium risk				1.476	1.445
	High risk				2.162*	2.084
	Extreme risk				4.970**	4.821**
Program participation	Any vocational program					.757
	Constant	6.880***	1.806	2.203	.737	.768
	-2LL	489.55	437.68***	435.02	424.81*	424.46

*p≤.05, **p≤.01, ***p≤.001

Table E.3. Logistic regression results: Recidivism by substance abuse program participation

Block	Variable	Model 1 Exp(B)	Model 2 Exp(B)	Model 3 Exp(B)	Model 4 Exp(B)	Model 5 Exp(B)
Demographics	White	.648	.701	.670	.683	.668
	Married	.570*	.743	.759	.807	.810
	Age at intake	.972*	.973*	.973*	.989	.990
Criminal history	Total prior offenses		1.397***	1.379***	1.356***	1.352***
	Current drug offense		1.264	1.330	1.395	1.368
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			1.044	1.281	1.241
Criminogenic needs and risk	Total average need score				1.040	1.040
	Medium risk				1.467	1.496
	High risk				2.183*	2.294*
	Extreme risk				4.901**	5.340**
Program participation	Any substance abuse program					1.498
	Constant	6.880***	1.806	2.203	.612	.600
	-2LL	489.55	437.68***	435.02	424.94*	423.37

*p≤.05, **p≤.01, ***p≤.001

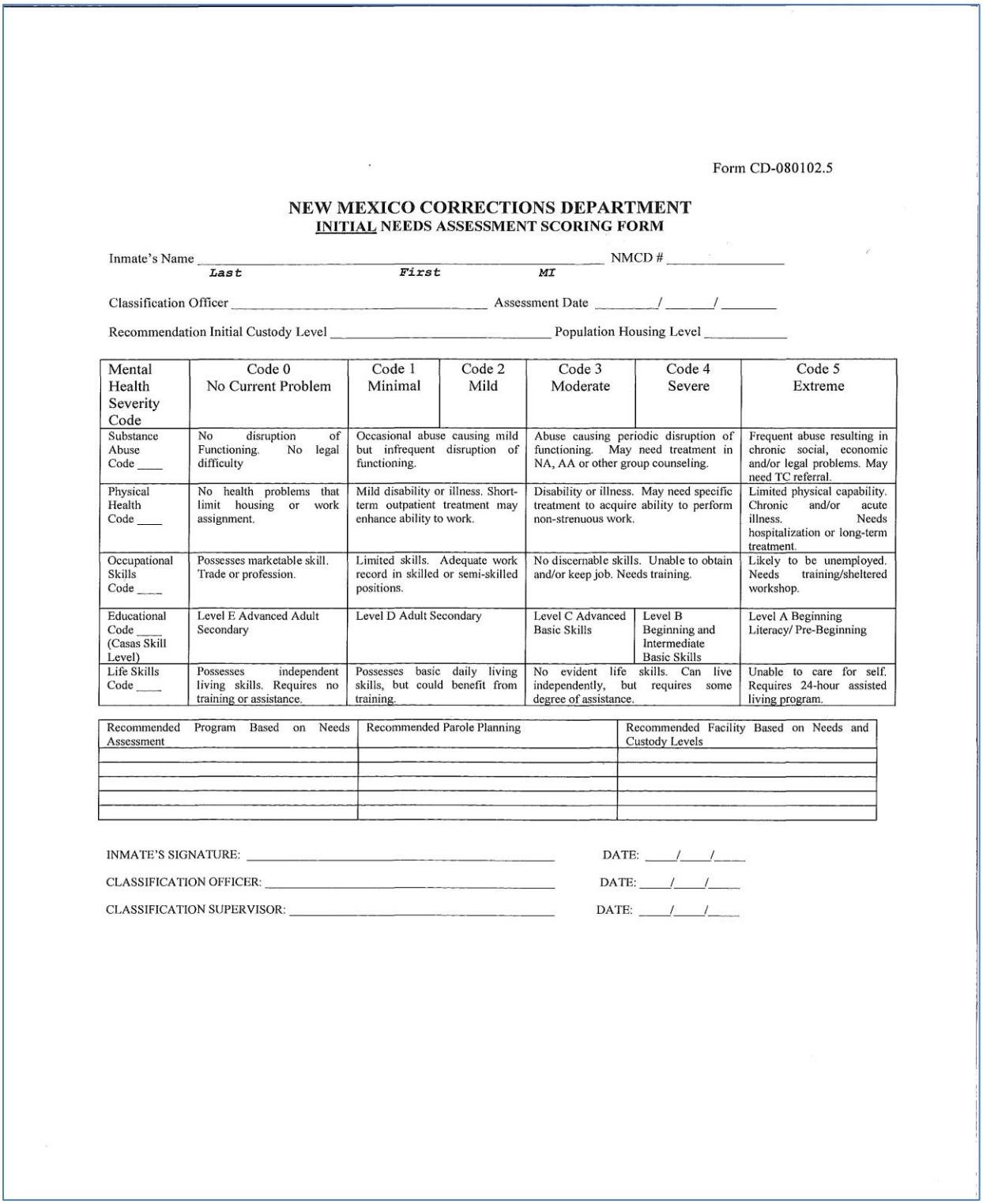
Table E.4. Logistic regression results: Recidivism by mental health/cognitive program participation

Block	Variable	Model 1 Exp(B)	Model 2 Exp(B)	Model 3 Exp(B)	Model 4 Exp(B)	Model 5 Exp(B)
Demographics	White	.616*	.651	.621	.635	.630
	Married	.599*	.802	.824	.862	.874
	Age at intake	.371*	.973	.972*	.988	.988
Criminal history	Total prior offenses		1.395***	1.378***	1.363***	1.365***
	Current drug offense		1.182	1.227	1.285	1.277
Criminal justice system-related	Length of incarceration			1.000	1.000	1.000
	Supervised post release			.926	1.187	1.178
Criminogenic needs and risk	Total average need score					
	Medium risk				1.488	1.503
	High risk				2.225*	2.269*
	Extreme risk				4.603**	4.822**
Program participation	Any mental health/ cognitive program					1.363
	Constant	7.403***	1.928	2.560	.743	.743
	-2LL	518.88	464.24***	461.37	450.99*	450.40

*p≤.05, **p≤.01, ***p≤.001

Appendix F. Needs Assessment Scoring Form

Figure F.1. Needs Assessment Scoring Form



Form CD-080102.5

NEW MEXICO CORRECTIONS DEPARTMENT
INITIAL NEEDS ASSESSMENT SCORING FORM

Inmate's Name _____ NMCD # _____
Last *First* *MI*

Classification Officer _____ Assessment Date _____/_____/_____

Recommendation Initial Custody Level _____ Population Housing Level _____

Mental Health Severity Code	Code 0 No Current Problem	Code 1 Minimal	Code 2 Mild	Code 3 Moderate	Code 4 Severe	Code 5 Extreme
Substance Abuse Code ____	No disruption of Functioning. No legal difficulty	Occasional abuse causing mild but infrequent disruption of functioning.		Abuse causing periodic disruption of functioning. May need treatment in NA, AA or other group counseling.		Frequent abuse resulting in chronic social, economic and/or legal problems. May need TC referral.
Physical Health Code ____	No health problems that limit housing or work assignment.	Mild disability or illness. Short-term outpatient treatment may enhance ability to work.		Disability or illness. May need specific treatment to acquire ability to perform non-strenuous work.		Limited physical capability. Chronic and/or acute illness. Needs hospitalization or long-term treatment.
Occupational Skills Code ____	Possesses marketable skill. Trade or profession.	Limited skills. Adequate work record in skilled or semi-skilled positions.		No discernable skills. Unable to obtain and/or keep job. Needs training.		Likely to be unemployed. Needs training/sheltered workshop.
Educational Code ____ (Casas Skill Level)	Level E Advanced Adult Secondary	Level D Adult Secondary		Level C Advanced Basic Skills	Level B Beginning and Intermediate Basic Skills	Level A Beginning Literacy/ Pre-Beginning
Life Skills Code ____	Possesses independent living skills. Requires no training or assistance.	Possesses basic daily living skills, but could benefit from training.		No evident life skills. Can live independently, but requires some degree of assistance.		Unable to care for self. Requires 24-hour assisted living program.

Recommended Program Based on Needs Assessment	Recommended Parole Planning	Recommended Facility Based on Needs and Custody Levels

INMATE'S SIGNATURE: _____ DATE: ____/____/____

CLASSIFICATION OFFICER: _____ DATE: ____/____/____

CLASSIFICATION SUPERVISOR: _____ DATE: ____/____/____