Predictors of Client Success in Day Report Centers: Successful Program Completion and its Relationship to Recidivism

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Day Reporting Centers (DRCs) are community corrections facilities where offenders are supervised and receive services during the day, but are then permitted to return to their own homes in the evening. Nationally, DRCs have become an increasingly popular alternative to incarceration in prison or jails in recent years. This is largely due to their cost effectiveness compared to more secure confinement settings as well as the community-based treatment options they provide. The development of these programs has proven to be an attractive option for policy-makers, as DRCs offer the possibility of simultaneously reducing both prison crowding and rates of recidivism.

In West Virginia, the process of creating a statewide system of DRC programs began with the passage of the Community Corrections Act in 2002. This act enabled counties and certain municipalities to establish DRCs and created a special revenue account to fund these programs. The first DRC facility became fully operational in 2002, and the number of DRCs continued to grow throughout the 2000s. By 2013, there were 22 DRCs in the state, supervising a population of approximately 4,000 clients.

Despite the promise of DRCs, however, research is still mixed concerning the impact of these programs on client outcomes. There is some evidence that offenders who participate in DRCs have lower rates of recidivism, but this effect appears to be contingent on the manner in which clients exit the program. In particular, prior studies indicate that recidivism rates are significantly lower for clients who complete DRC programs successfully than for clients who fail to complete DRC programs and experience an unsuccessful termination (Craddock, 2000, 2004; Roy and Grimes,

Report Highlights...

This study examines the factors predictive of successful program completion, and the relationship between client success and recidivism.

The strong link between length of stay, risk scores, and program completion provides clear guidance to program administrators, staff, and policy-makers on best practices for reducing recidivism in DRCs.

The relationship between length of stay (i.e., dosage) and successful program completion underscores the need for reinforcements/incentives and motivational interviewing strategies in DRC programs.

Client risk score is the strongest predictor of program completion, confirming that staff time is best spent on targeting high risk offenders with intensive services in order to improve program completion rates and reduce recidivism (i.e., the risk principle).

The results suggest that the consideration of offender risk and needs during the judicial process can lead to better outcomes for both the DRC client and public.

This study improves on previous studies by a) examining a statewide sample of DRC clients, b) estimating both bivariate and multivariate statistical models, and c) integrating a host of new explanatory variables.

Implications for gender-specific programming, the nature and scope of treatment interventions offered by DRCs and future research are discussed.

2002; Rhyne, 2005; Barton and Roy, 2005). Consequently, successful program completion appears to play key role in determining the impact of DRC programming on recidivism.

Yet, little is currently known about the factors associated with successful program completion. It is anticipated that a better understanding of these factors will have important policy implications. For example, this knowledge will help staff to identify clients who at greater risk of program failure and may highlight treatment options that can be used to increase the likelihood of successful program completion. In addition, it may also provide the basis for policy changes designed to improve rates of successful program completion across entire programs. Given the strong relationship between successful program completion and recidivism observed in prior studies, these efforts are likely to be rewarded with decreases in the rate of recidivism for DRC clients.

This report assesses the efficacy of West Virginia DRC programs by investigating the factors which influence the likelihood that clients successfully complete their supervision. It also provides a preliminary examination of the relationship between the manner in which clients exited the program and their risk of recidivism during a 24 month period following their release. The report begins with a review of previous research on DRCs with an emphasis on highlighting those factors that are likely to be associated with successful program completion. This is followed by a detailed account of the analytic methods and the results of the empirical analysis. The report concludes with a discussion of policy implications and recommendations for both policy and practice in the state's DRC programs.

RESEARCH ON EFFECTIVE COMMUNITY-BASED TREATMENT

Day Report Centers and Client Program Completion

The creation of DRCs is a fairly recent development in corrections, with most centers in the United States beginning operations in the 1990s or early 2000s. Consequently, the literature on the effectiveness of DRCs is still relatively small. Most of this work has focused on assessing the ability of DRC programming to reduce recidivism, usually by comparing the recidivism rates of DRC clients with similar offenders who did not participate in the program. This research has generally produced mixed findings (Boyle, Ragusa-Salerno, Lanterman and Marcus, 2013). While some studies report lower rates of recidivism for DRC clients (Craddock, 2004, 2009; Ostermann, 2009; Champion, Harvey and Schanz, 2011) others find that there was is no statistically significant

difference between the recidivism rates of DRC clients and other offenders (Jones and Lacy, 1999, Marciniak, 2000, Boyle et al., 2013). Thus, it remains unclear whether participation in a DRC program generally reduces recidivism.

However, DRC evaluation research has produced more consistent findings when comparing the recidivism rates of clients who successfully complete their programs to those who do not. Studies employing this approach point to the fact that offenders who participate in DRCs do not all have the same experiences while in the program (Roy and Grimes, 2002). Some clients make adequate progress and complete their programs successfully, while others struggle and fail to complete their programs. This is often either because they drop out or are withdrawn from treatment after committing violations or failing to comply with program rules. Hence, if DRC programming reduces recidivism, then one would expect its effects to be most obvious for successful clients. This is thought to be due to the completion of treatment modalities and case plans developed by program staff. Empirical research appears to bear out this claim, as a number of studies report significantly lower rates of recidivism for successful clients and suggest that program completion is a powerful predictor of post-release outcomes (Craddock, 2000, 2004; Roy and Grimes, 2002; Rhyne, 2005; Barton and Roy, 2005).

Other studies suggest that the inconsistent findings in regards to DRCs and recidivism reduction might be due to varying completion rates among program participants.

Report Highlights...

Research studies have produced mixed results regarding the capacity of DRCs to reduce recidivism.

Evaluation research points to the importance of successful program completion for reducing the likelihood of recidivism.

Research to date provides little information on the *predictors* of successful program completion.

Few empirical studies have examined program completion as an outcome of interest, or dependent variable, in its own right.

The results of this study provide critical information for programs working to identify clients with a high likelihood of program failure.

Individual DRC facilities have been found to vary greatly in regards to their completion rates, with researchers reporting completion rates as low as 13.5% (Marciniak 1999) and as high as 84% (Diggs and Piper 1994). Since most previous evaluation studies have focused their analysis on a small number of facilities, one potential reason for their conflicting findings is that they may have examined groups of DRC clients with significantly different completion rates. If clients who complete their programs are indeed less likely to recidivate, then a study which examines a DRC with a high completion rate would be more likely to find that DRC clients had lower rates of recidivism compared to other offenders. Conversely, if the DRC under study had a low completion rate, then researchers would be more likely to observe that DRC participation had little or no impact on recidivism. Therefore, studies which ignore program completion are likely to suffer from omitted variable bias because they exclude a variable—program completion—that is likely to be an important predictor of recidivism.

Nonetheless, there have been few empirical studies which have examined program completion as an outcome of interest, or dependent variable, in its own right. Yet, a few studies have provided some initial insights into the characteristics of successful clients, finding that clients were more likely to complete their programs if they were older and had fewer prior convictions (Roy and Grimes, 2002; Craddock, 2009), and if they were sentenced to the DRC for misdemeanors (Kim, Joo, and McCarty, 2008). However, there is still much to be learned about the causes of successful program completion.

Program Completion as a Function of Client Risk

Offender risk and needs assessment plays a crucial role in determining the manner in which clients are supervised and treated in day report programs. According to the principles of effective correctional intervention, clients assessed as having a higher risk of recidivism should receive both a higher level of case supervision and a greater treatment dosage (Andrews, Bonta, and Hoge, 1990). This strategy of providing more services to higher risk individuals is frequently described as adhering to the "risk principle" (Lowenkamp, Pealer, Smith and Latessa, 2006). Likewise, the principles of effective correctional intervention also assert that interventions should be targeted to address clients specific criminogenic needs. This strategy of targeting interventions is described as adhering to the needs principle (Smith, Cullen, and Latessa, 2009).

Among the most prominent and widely used actuarial risk and needs assessment tools are the Level of Service/

Case Management Inventory (LS/CMI), and its predecessor the Level of Service Inventory-Revised (LSI-R), which are currently in use in more 900 correctional agencies across North America (Smith et al., 2009). The LS/CMI is also used by all community supervision agencies in WV, including day report centers, as part of the Governor's statewide implementation initiative. The popularity of these particular assessment tools is based on their extensive empirical support and the fact that they capture both static and dynamic risk factors (Vose, Cullen and Smith, 2008). Dynamic risk factors are particularly useful for guiding the treatment decisions of DRC staff and for measuring client treatment gains because they are amenable to change over time. The LS/CMI and LSI-R are therefore well suited to the needs of DRCs and other rehabilitation programs. There is substantial empirical evidence which indicates that clients who are assessed as having higher levels of risk are indeed more likely to recidivate, and that correctional programs can substantially reduce recidivism by adhering to the risk and needs principles (Lowenkamp et al., 2006; Sperber, Latessa and Markarios, 2013).

However, rehabilitative efforts may not have much of an impact if high risk clients do not successfully complete their programs. For this reason, it is important know whether actuarial risk assessments can be used to predict the likelihood of program completion. If risk assessments are effective predictors of the likelihood of program completion, then staff can maximize the impact of their programs by targeting high-risk clients for motivational interviews and other retention techniques. Fortunately, the extant literature indicates that there is likely to be a close association between client

risk and the likelihood of successful program completion.

Prior validation studies on the LSI-R series have confirmed the predictive validity of these assessments on various forms of recidivism, including new arrest, convictions, probation/parole violations, and institutional misconduct in a variety of settings (Holsinger, Lowenkamp, and Latessa, 2009; Vose et al., 1998). Clearly, there are strong similarities between these outcomes and behaviors associated with program failure. However, only one study to date has directly tested the ability of actuarial assessments to predict successful completion. Holsinger (2013) found that client risk scores were strong, statistically significant predictors of likelihood of program completion, and that risk scores alone correctly predicted 60-70% of the variation in completion outcomes. These findings are important and suggest that practitioners can use risk assessment tools to identify clients who are less likely to complete their programs, but they are not definitive. Since this study did not control for other potential predictors of program completion, it remains unclear whether this relationship holds true once the effects of other predictors are taken into account. In addition, more studies are needed to determine if these findings can be generalized.

The Influence of Length of Stay on Program Completion

One of the most important elements of evidence-based practices in corrections is the idea that offenders need to receive an adequate amount of treatment, or dosage, in order for it to have a significant effect on client behavior and recidivism. Treatment dosage is usually thought of in terms of time or duration (i.e., days, hours, or units of programming), but

> *Report Highlights...*
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> Treatment and supervision dosage refers to duration and intensity, and is most commonly measured by the number of hours of treatment, the number of programs completed, the number of supervision contacts and the length of stay of in a program.
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> Research indicates that offenders must receive an adequate dosage of correctional treatment in order for it to have a significant effect on recidivism.
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> Prior studies show that DRC clients who spend more days in DRC custody are less likely to recidivate.
>
> Some evidence indicates that longer stays are associated with a greater likelihood of successful program completion.

can also involve intensity or the "stacking" of interventions (Sperber et al., 2013). The effects of treatment are therefore more likely to be observed when treatments have been appropriately matched to client needs and when sufficient dosage has occurred based on the risk level of the offender.

In this regard, Bourgon and Armstrong (2005) found that, for prison inmates, more than 200 hours of treatment was needed to reduce recidivism for moderate offenders. The researchers further discovered that even 300 hours of treatment was not enough to have a significant effect on recidivism for high risk offenders. These findings have been taken by some researchers to mean that a minimum of 300 hours of treatment is necessary to reduce recidivism for high risk offenders. Similarly, in a study of offenders released from a community-based corrections facility, Sperber et al (2013) found that high risk offenders needed to receive 200 or more hours of treatment in order to experience reductions in recidivism. Consistent with the risk principle, they also observe that the size of these effects was much larger for high risk offenders compared clients with lower levels of risk. In short, while preliminary research suggests prison inmates may need longer periods of treatment than offenders in the community, both populations require a substantial amount of dosage to achieve appreciable reductions in recidivism.

When information about the precise number of treatment hours is unavailable, or when offenders receive many different types of services that are not easily compared, studies often turn to offenders' length of stay in a program as a measure of dosage. Here, several studies have found a strong relationship between time spent in DRC custody and reductions in recidivism. For example, Martin, Lurigio and Olson (2003) found that offenders were significantly less likely to rearrested or reincarcerated when they spent more than 70 days in a DRC program. Likewise, Barton and Roy (2005) also observed that offenders who stayed in their programs for 180 days or more were less likely to recidivate compared to those who stayed for a shorter period of time. In addition, evidence of a relationship between greater length of stay and reductions in illegal behavior has also been found for other kinds of rehabilitation programs, including juvenile offender interventions (Lipsey, 1999) and substance abuse programs (Hubbard, Craddock, Flynn, Anderson and Ethridge, 1997).

Less is known empirically about the relationship between length of stay and the likelihood of program completion, but many of the suppositions which underlie the literature on treatment dosage imply that DRC clients who spend longer periods of time in treatment should be more likely to

Table 1. DRC Population and Study Sample by Admission Type for Clients Terminated in 2011

	n	*%*
Included In Study (*n* = 2,030)		
Direct Sentence without Probation	841	24.4
Direct Sentence with Unsupervised Probation	361	10.5
Direct Sentence with Regular Probation	828	24.0
Excluded From Study (*n* = 1,419)		
Transfer from Another Program	93	2.7
Parole Referral	127	3.7
Probation Referral	26	0.7
Referral from Drug/Family Court	23	0.7
DHHR Referral	30	0.9
Pre-trial Assigned as Condition of Bond	531	15.4
Pre-trial Diversion	21	0.6
Evaluation Only	403	11.6
Home Confinement	64	1.8
Other Admission Type[a]	101	2.9

Note: [a] Clients are included in the admission type category if they have an admission status that is reported as "other" or have an admission type that that occurs fewer than ten times in the sample.

complete their programs successfully. Furthermore, there is some evidence that the likelihood of successful program completion increases as DRC clients stay in programs longer. For instance, a study of DRC programs in Oregon, observed that successful clients spent about 36 more days in the program, on average, than unsuccessful clients and found that difference to be statistically significant (Rhyne 2005). In a similar fashion, Barton and Roy (2005) observed that clients were more likely to successfully complete their program when they were sentenced to DRCs for 180 days or longer. Likewise, Kim et al (2008) included a measure of length of stay in multivariate models of program termination. They found that length of stay had a significant impact on the likelihood of successful completion even when controlling for confounding factors such offender' employment status, age and gender. Their analysis indicated that, on average, DRC clients' odds of successful completion increased by roughly 1% for each additional day they spent in the program. As a result, there is good reason to expect that clients' length of stay should have an impact on their likelihood of program completion.

DATA AND METHODS

Sample Selection

This study examines a sample of 2,030 direct sentence clients terminated from DRC programs in 2011. While day report centers receive cases from a variety of sources, direct sentence clients typically spend significant periods of time in DRC custody (i.e., approximately 9 months on average) and are expected to receive a range of rehabilitative and supervision services. Consequently, they comprise the most appropriate sample for studies investigating program completion and recidivism. The sample of 2011 releases allows for a 24 month follow-up period for the purpose of tracking client recidivism.

As Table 1 shows, 2,030 direct-sentence clients were released from WV DRCs in 2011. This group serves as the sample for this report, and comprises about 59% of all the releases in 2011. A little less than half of these clients were sentenced to the DRC with regular probation, while the rest were either sentenced without probation or with unsupervised probation. The remaining 1,419 clients were sentenced to DRC custody in several different ways. The most common admission types for these clients included parole referrals, pre-trial assignment as a condition of bond, and admission for evaluation only. Table 1 displays the distribution of all admission types for the sample. These results suggest that West Virginia DRCs are being used for a variety of purposes and serve a diverse range of clients.

Data Sources

The present study utilizes data extracted from two data systems: the Community Corrections Information System (CCIS) managed by the Division of Justice and Community Services (DJCS), Office of Research and Strategic Planning (ORSP), and the WV Regional Jail and Correctional Facility Authority (RJCFA) TAG database. The CCIS contains information for a broad array of variables related to the characteristics and experiences of DRC clients which is entered directly into the system by staff. The CCIS is a statewide system that is utilized by all active DRCs in West Virginia.

In addition, this analysis makes use of booking records provided by the West Virginia Regional Jail and Correctional Facility Authority's TAG database to track recidivism. The RJCFA data captures information on all regional jail booking throughout the state. These data are especially useful as a measure of recidivism because they record all pre- and post-sentence admissions into the state's correctional system. Hence, regional jail bookings offer a useful indicator for the degree to which clients released from day report centers continue to have an impact on state correctional resources. Moreover, bookings into the regional jail system tends to capture more serious offenses and exclude arrests for minor offenses often handled through the issuance of a citation or summons.

Measurement

For this report, the outcome of interest, or dependent variable, is *successful program completion*. This variable is dichotomous and is coded as 1 for each client who was terminated from their program successfully and 0 otherwise. Successful terminations are indicated by DRC staff in the CCIS and is comprised of all clients who completed all of the court-ordered requirements of their sentence.

We examine the relationship between successful program completion and a number of different independent variables shown to be predictors of client success. Our primary independent variables are *length of stay*, which records the number of days that clients spent in the program, and the *LS/CMI risk score*, which is the total recidivism risk score assigned to clients by staff using the LS/CMI assessment tool. This score ranges from 0-43 with higher scores indicating a greater assessed risk of recidivism.

In addition, we also examine several other variables related to clients' demographic and legal characteristics, some of which have been included in previous studies of program completion. *Age* is a continuous variable which records the age of clients (in years) when they were terminated

Report Highlights...

This study examines a sample of 2,030 direct sentence DRC clients terminated from programs in 2011.

Recidivism is measured as a new regional jail booking within 2 years or 24 months of a clients release from a DRC.

Regional jail bookings provide a useful indicator for the degree to which clients released from day report centers continue to have an impact on state correctional resources, and tends to capture more serious offenses.

Multiple bivariate and multivariate tests are performed, including logistic regression and area under the curve (AUC) analysis to examine the predictors of successful program completion and recidivism.

from their programs. *Gender* and *race/ethnicity* are both dichotomous variables coded as 1 for female and minority (or nonwhite) respectively. Likewise, the dichotomous variable *employment status* is coded as 1 for all clients unemployed at the time of admission, while *education status* is coded as 1 for clients with a high school degree or equivalent (GED). Since the literature suggests that clients are more likely to succeed when they have a stable living environment or social support structures, we also include a measure of living situation. In regards to clients' legal characteristics, we also include a measure of clients' *criminal history* which records the number of prior felony or misdemeanor convictions. We also include two dichotomous variables related to the nature of clients' placement offenses. *Placement offense (class)* is coded as 1 if the client was sentenced in response to a felony offense. *Placement offense (type)* is coded as 1, if the most serious placement offense was a property offense.

Analysis

The analysis proceeds in three general stages. First, we conduct bivariate analyses which examine how program completion rates vary for groups of clients with different characteristics. We use chi-square tests to determine whether these differences can be considered statistically significant. In the second stage, we build on these findings by constructing a multivariate statistical model of the

Table 2. Demographic and Legal Characteristics of Direct-Sentence DRC Clients Terminated in 2011 (N = 2,030)

	n	%		n	%
Age (mean = 32.0, SD = 9.9)			**Employment Status**		
Under 20	113	5.6	Full-Time	511	25.2
20-29	888	43.7	Part-Time	155	7.6
30-39	609	30.1	Unemployed	1039	51.2
40-49	280	13.9	Retired or Disabled	195	9.6
50 and Over	140	6.9	Unknown	130	6.4
Total	2030	100.0	Total	2030	100.0
Race			**Education Level**		
White	1885	92.9	Did Not Graduate H.S.	577	28.4
Black	88	4.3	H.S. Diploma	775	38.2
Hispanic or Latino	30	1.5	GED	356	17.5
Multi-Racial or Other	27	1.3	Post H.S. Education	79	3.9
Total	2030	100.0	Unknown	243	12.0
			Total	2030	100.0
Gender			**Placement Offense (Class)**[a]		
Male	1491	73.4	Misdemeanor	1084	63.6
Female	539	26.6	Felony	620	36.4
Total	2030	100.0	Total	1704	100.0
Marital Status			**Placement Offense (Type)**[b]		
Single	1101	54.3	Person	462	22.8
Married	369	18.2	Property	599	29.5
Divorced or Separated	490	24.1	Drug	420	20.7
Other	26	1.3	Public Order	393	19.4
Unknown	44	2.1	Other[B]	156	7.6
Total	2030	100.0	Total	2030	100.0
Living Situation					
Living alone	346	17.1			
Living with Spouse/Partner	647	31.9			
Living with Parents	851	41.9			
Residential Treatment	3	0.1			
Shelter/No Housing	15	0.8			
Living with Other	96	4.7			
Situation Unknown	72	3.5			
Total	2030	100.0			

Note: [a] Placement offenses refer to the crimes for which clients were sentenced to the DRC. Statistics are calculated using the most serious offense for each client. Felonies are considered more serious than misdemeanors. Person offenses are considered the most serious type of offense, followed by property offenses, drug offenses, and public order offenses. Data for offense class is not available for 326 clients or approximately 16% of the sample. [b] The "other" offense category includes various crimes which did not fall into the other categories (e.g., conspiracy, and attempt to commit a felony or misdemeanor).

likelihood of successful program completion using logistic regression. This approach enables us to estimate the size of the impact that each causal factor has on the likelihood of completion, while also controlling for the confounding effects of other variables. Finally, in the third stage, we conduct a bivariate examination of the relationship between program completion and recidivism using chi-square tests.

RESULTS

Demographic and Legal Characteristics of Direct-Sentenced DRC Clients

Table 2 describes the demographic and legal characteristics of the 2,030 clients in the sample. Most clients are white, single males who possess either a high school diploma or a GED. The average age for clients is 32 years, and most clients fall into either the 20-29 or the 30-39 age groups. At the start of treatment, most clients reported living with their parents or with a spouse or partner, and a majority were unemployed.

In addition to demographic characteristics, Table 2 also describes the details of the offenses for which clients were sentenced to the DRC. In those cases where clients were sentenced as a result of more than one offense, the most serious placement offense is reported. As shown in Table 2, most of the clients in the sample are not felony offenders, as only about 36% were sentenced for offenses that included a felony. In regards to type of placement offenses, property offenses are most common, as about 30% of the clients in sample were sentenced for crimes that included a property offense as the most serious crime. The rest of the sample is fairly evenly divided between clients whose most serious crimes were person offenses, drug offenses and public order offenses.

Figure 1 describes the criminal histories of the clients

Report Highlights...

Most DRC clients in the sample are single, white males between the ages of 20 and 29.

Forty-two percent (42%) lived with their parents at the time of admission, while another 32% lived with their spouse or partner or alone (17%).

At the time of admission, only 33% of clients were employed while roughly 60% had a high school diploma or GED.

Most clients in the sample are misdemeanor offenders, with 64% sentenced to the DRC in response to a misdemeanor crime.

Property crimes are the most common type of crime committed by clients in the sample, with drug offenses being the least common.

in the sample. It reveals that most clients do not have an extensive criminal history. Only about 15% of clients have a prior felony conviction and only about 43% have a prior misdemeanor conviction. Taken together, these statistics indicate that about 42% of clients are first-time offenders with no prior convictions. Along these same lines, Figure 1 also shows that only about 25% of clients had previously been incarcerated in prison or jail, and that only about 14% had previously been sentenced to probation or parole. These findings are somewhat surprising, given that DRC programs are generally intended to provide services and supervision to high risk offenders who might

Figure 1. Criminal History of Direct-Sentence DRC Clients Terminated in 2011 (N = 2,030)
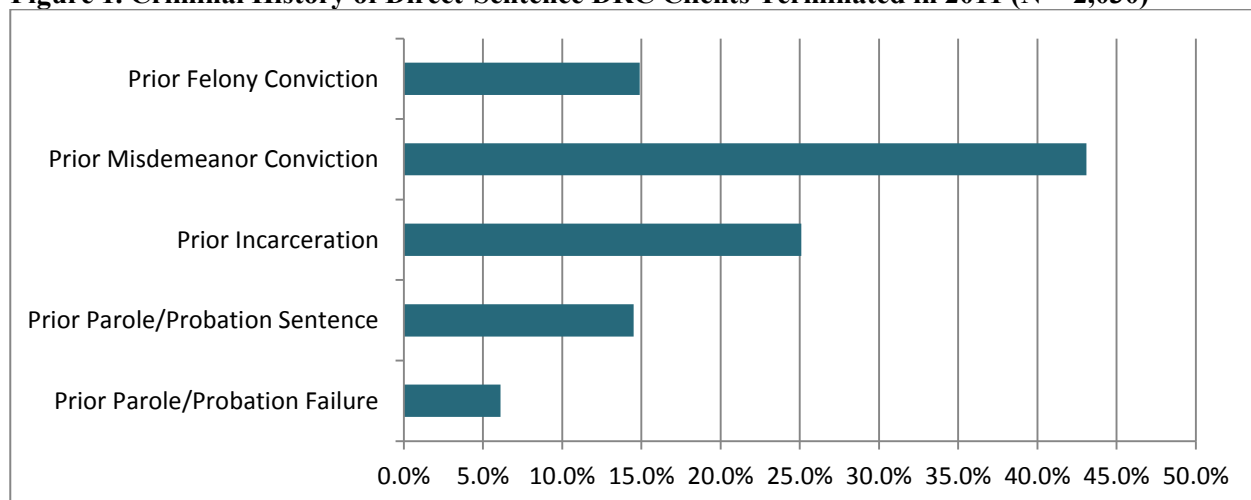
Table 3. Prevalence of Placement Offenses and Criminal History Events for Direct-Sentence DRC Clients Terminated in 2011 (N = 2,030)

Offense or Event	Total Count[a]	Avg. per Client[b] (std. dev.)	% of Clients with at least 1	% of Clients with 2 or more	% of Clients with 3 or more
Placement Offenses (Class)[c]					
Felony	903	0.53 (1.77)	36.4	6.5	1.5
Misdemeanor	1324	0.78 (0.67)	66.8	8.8	1.6
Placement Offenses (Type)					
Person	522	0.25 (0.50)	22.8	2.5	0.2
Property	940	0.46 (1.66)	30.7	5.6	1.0
Drug	494	0.24 (0.49)	22.0	1.8	0.3
Public Order	553	0.27 (0.54)	23.3	3.1	0.4
Criminal History					
Felony Convictions	532	0.26 (1.56)	14.5	4.7	2.2
Misdemeanor Convictions	3158	1.56 (3.48)	42.8	29.5	19.5
Incarcerations	1555	0.76 (2.33)	25.2	14.3	8.8
Parole/Probation Sentences	459	0.22 (0.69)	14.4	4.3	1.9
Parole/Probation Failures	166	0.08 (0.35)	6.5	1.1	0.3

Note: [a] This column reports the total count of offenses and criminal history events for the total sample. Individual clients can have offenses or criminal history events. [b] Average per client is calculated by dividing the total count of offenses or criminal history events by the total number of clients in the sample. [c] Offense class is not available for 326 clients or approximately 16% of the sample.

be incarcerated if the alternative sanction did not exist.

Finally, Table 3 describes the prevalence of different types of placement offenses and criminal history events among the clients in the sample. The findings are consistent with those in Table 2 and Figure 1, but add several additional insights. First, Table 3 shows that while most clients do not have multiple prior felony convictions, incarcerations, or probation sentences, about 20% of clients do have three or more misdemeanor convictions. This suggests that while most clients lack an extensive criminal history, a substantial proportion of clients have committed a large number of misdemeanor offenses. In regards to placement offenses, property offenses are the most common and are about twice as numerous as any offenses in any other category, while drug offenses are the least common. In addition, about 6% of DRC clients were sentenced in response to multiple property offenses.

Variations in Risk and Needs for Direct-Sentenced DRC Clients

As part of efforts to adhere to the principles of evidence-based practices, all clients are expected to receive a risk and needs assessment using the LS/CMI. The total risk and needs scores produced by these assessments are summarized in Figure 2, which describes the percentage of clients falling into five major risk categories, ranging from very low to very high. Most clients (about 75% of the sample) fall into either the medium risk or high risk categories, suggesting that DRCs are being used to target higher risk offenders. In addition, the distribution of scores also roughly approximates a bell-shaped curve, with relatively few clients falling into very low or very high risk categories.

One issue of growing interest to both researchers and practitioners is the extent to which the risk and needs of female clients differ from their male counterparts. We compare the distribution of risk scores for male and female clients in Figure 3. It shows that men are more likely to be assessed as having a high or very high level of recidivism risk, while women are more likely to be classified as having a medium or very-low level of risk. The average total risk score is also about 1 point higher for male clients than for female clients. Although these differences are relatively small, the results of an independent samples t-test indicate that they are statistically significant

Figure 2. Total LS/CMI Risk Scores for Direct-Sentence Clients Terminated in 2011 (N = 1,491)
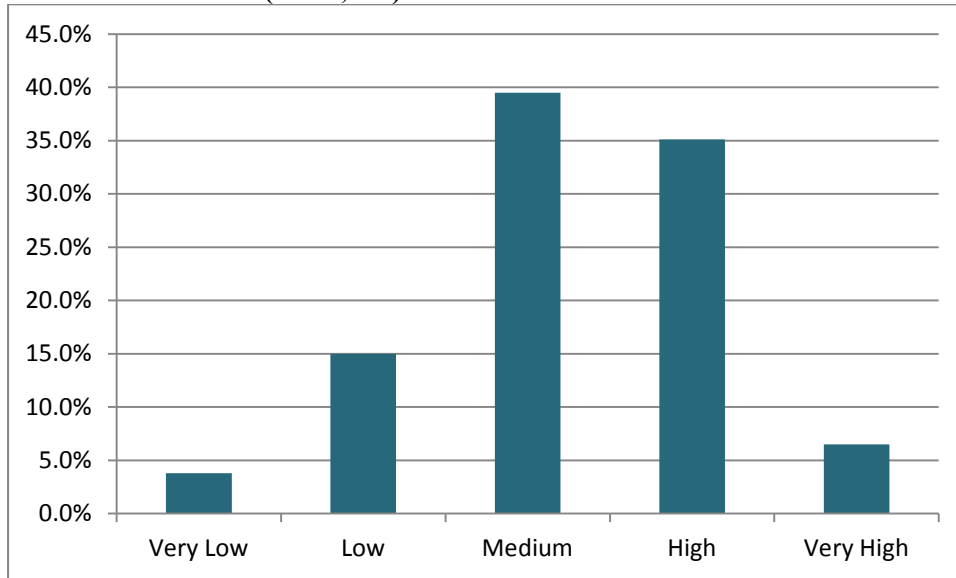
Note: LS/CMI assessment data are not available for 539 clients or approximately 26% of the sample of clients sentenced directly to day report centers.

(p < .026) and highly unlikely to be due to chance.

The particular criminogenic needs of male and female clients in the sample is also examined in Table 4. These data provide further evidence that men are more likely to be assessed as posing a greater risk for recidivism. A larger percentage of male clients are classified as high need in each of the "big four" areas of criminogenic need (criminal history, prosocial attitudes, anti-social patterns, and companions), and in three of these areas the difference between male and female scores is large enough to be considered statistically significant. In addition, female clients also have significantly

higher scores in the area of family/marital needs.

Distribution of Programmatic Interventions Provided to Direct-Sentenced DRC Clients

While in DRC custody, clients are expected to receive variety of rehabilitative services which are intended to address their particular criminogenic needs and reduce their risk of recidivism. These services are recorded in the CCIS database as interventions, which are provided to clients either by the DRC or by a third party service provider. In this regard, it should be noted that the term

Figure 3: Total LS/CMI Risk Scores by Gender (N = 1,491)
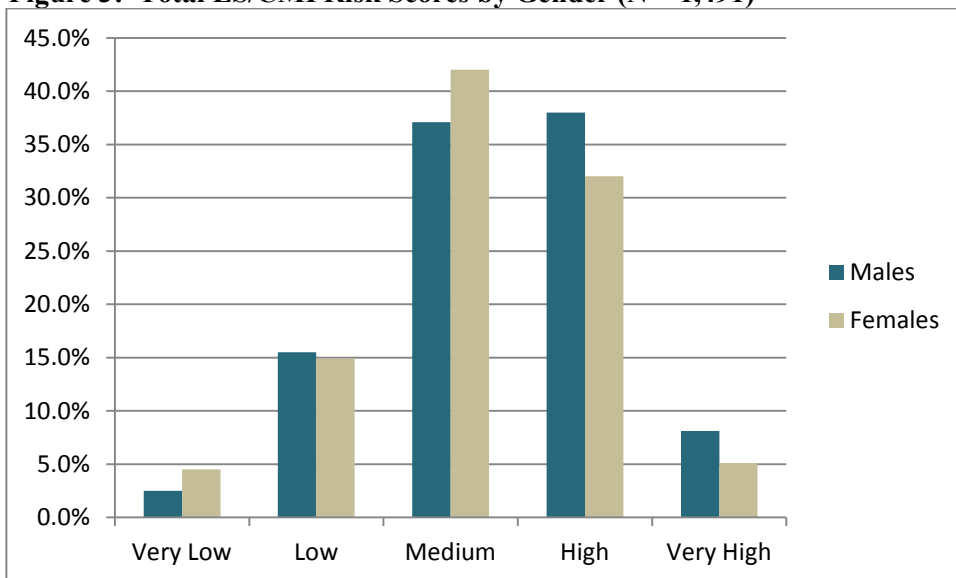
Note: Mean = 18.1 for males and 17.1 for females; t = 2.227, p < .026.

Table 4. Number and Percentage of Direct-Sentenced DRC Clients Scoring High on Criminogenic Needs by Gender[a]

Criminogenic Need	Male (n = 1,070)		Female (n = 421)		Total (n = 1,491)	
	# High Need	% High Need	# High Need	% High Need	# High Need	% High Need
Criminal History***	127	11.8	23	5.4	150	10.0
Prosocial Attitudes***	127	11.8	34	8.0	161	10.7
Antisocial Patterns**	124	11.5	40	9.5	164	10.9
Companions	395	36.9	151	35.8	546	36.6
Education/Employment	403	37.6	162	38.4	565	37.8
Family/Marital***	228	21.3	105	24.9	333	22.3
Leisure/Recreation	641	59.9	254	60.3	895	60.0
Alcohol/Drug problem	462	43.1	214	50.8	646	43.3

Note: * p < .05, ** p < .01, *** p < .001. [a] High in need is defined as scoring high or very high based on LS/CMI cut-off scores for each criminongenic need domain. LS/CMI assessment data are not available for 539 (421 male and 118 female) clients.

intervention refers to an entire program of treatment, and not to an individual supervision contact or treatment session.

One average, the clients received about 3 separate interventions while in DRC custody, and as can be seen in Table 5, these services took many different forms. The most common interventions were those related to substance abuse treatment, as they accounted for about 30% of all of the interventions that clients received. In addition, another 4.4% of interventions were related to client participation in Alcoholics Anonymous or Narcotics Anonymous support groups, and another 5% of interventions were related to participation in relapse prevention programs and drug education classes. Thus, nearly 40% of interventions were related to substance abuse issues.

Perhaps the most striking findings in Table 5 concern the number of interventions falling in the categories of individual counseling, therapy and skills training. These types of services, which directly target clients' major criminogenic needs (i.e., problem-solving, impulse control, procriminal attitudes and so forth) were far less common. Clients received relatively few services in these areas. For example, when one considers all of the interventions related to counseling, therapy and skills training together (i.e., the first 11 categories in Table 5), these services account for only about 28% of the interventions provided to clients. This suggests that, with

Report Highlights...

Forty-two percent (42%) of clients in the sample are first-time offenders with no prior convictions. Only 25% have a previous prison or jail incarceration, and only 14% have served a community sentence involving probation and/or parole.

In terms of recidivism risk, roughly 40% clients are high or very high risk, followed by 37% with medium risk and about 23% with low or very low levels of risk.

Male clients have a higher recidivism risk than female clients, and are more likely to have high needs in the areas criminal history, prosocial attitudes and antisocial patterns.

Female clients are more likely to have high needs in regards to family/marital issues.

On average, clients received about 3 interventions while in DRC custody, with roughly 40% of these interventions being substance abuse-related.

Table 5. Types of Interventions and Other Services Received by Direct-Sentence DRC Clients Terminated in 2011 (N = 1,286)

Type of Intervention or Service	Count	%	Avg. # per client
Individual Counseling	330	7.6	0.26
Rational Cognitive Therapy	50	1.2	0.04
Cognitive Therapy	54	1.3	0.04
Life Skills	167	3.8	0.13
Social Skills	25	0.6	0.02
Job Skills	51	1.2	0.04
Parenting Skills	100	2.2	0.08
Adult Basic Education GED	155	3.5	0.12
Women's Survival Skills	24	0.5	0.02
Domestic Violence/BIPPS	115	2.6	0.09
Anger Management	162	3.7	0.13
Substance Abuse Treatment	1313	30.0	1.02
NA/AA	193	4.4	0.15
Relapse Prevention/SA Edu.	217	5.0	0.17
Faith-Based Support Groups	52	1.2	0.04
Community Service	788	18.0	0.61
Other	580	13.2	0.45
Total	4376	100.0	3.41

Note: Multiple interventions can be received by each of the 2,030 clients in the sample. No interventions were reported for 744 or 36.7% of clients sentenced directly to day report centers in 2011. These clients are not included in the percentage and average per client calculations. Average number of interventions/services per client is calculated by dividing each count by the total number of cases for which an intervention was reported (N = 1,236).

the exception of drug and alcohol problems, some major criminogenic needs may require further attention through these treatment modalities. For example, Table 4 reports that about 38% of clients are assessed as having high needs in the area of education and employment, yet only about 1% of interventions are related to job skills training and only about 4% are related to adult basic education or GED classes.

We further examine the allocation of interventions in Figure 4, which presents the percentage of high-risk clients receiving at least 1 intervention in each of the 12 major categories of treatment associated with criminogenic needs. Clients are considered to be high-risk if their total risk assessment score placed them in either the high risk or very high risk categories. As shown in Figure 4, substance abuse treatment is by the far the most common service provided to high risk clients, with about 75% of high risk clients receiving at least 1 intervention in this category. About 22% of high risk clients received individual counseling, while about 12-15% received life skills training, adult basic education or anger management classes. No other type of

intervention was received by more than 10% of high risk clients. These findings provide further evidence of the pattern suggested by Table 5. Most of the interventions that clients received were related to substance abuse treatment while other criminogenic needs tend to receive less attention.

Factors Associated with the Successful Completion of DRC Programs

Table 6 describes the different ways in which clients exit the DRC program and the average length of stay (in days). Roughly 51% of clients completed the program successfully. This rate falls near the median of success rates reported for DRC programs in other states. Most clients who failed to complete the program did so because of a program-initiated termination for failure to comply with program rules or make adequate progress toward completion. Moreover, 3.6% clients failed due to a new arrest while in DRC custody and about 4.1% failed for a technical violation or revocation of probation or parole.

In regards to the timing of termination, Table 6 shows that

Figure 4. Percentage of High Risk Direct-Sentence DRC Clients Receiving Treatment by Category (N = 1,080)[a]
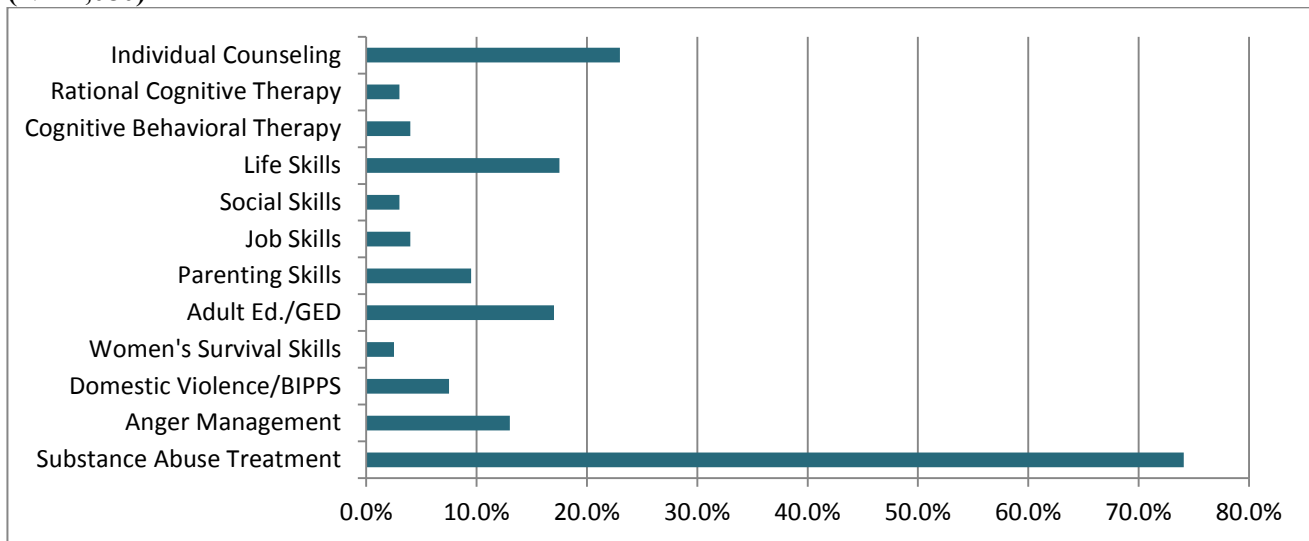
Note: [a] High risk is defined as scoring high or very high on total risk based on established LS/CMI cut-off scores (20 or higher). Percentages are calculated using a subsample of 1,080 clients with data for both interventions and risk and scores. A total of 950 clients lacked data for either interventions (744 clients) or risk and needs scores (539 clients).

successful clients spend an average of 262 days in the program. This is significantly longer than the average length of stay for clients who eventually fail the program due to a technical violation (190 days), program-initiated termination (215 days), client-initiated termination[1] (196 days) or a new crime (236 days). In addition, both successful and unsuccessful clients stay for a fairly long period of time (about 8 to 9 months), suggesting that most clients are sentenced to DRCs for a period long enough to receive meaningful treatment. Clients released from programs for reasons classified as "other" stay the longest with an average of 359 days[2].

Several additional insights into how clients exit DRC programs are provided in Table 7. This table reports the supervision status of clients in the period immediately following their release. There are substantial differences in regards to clients' post-release supervision status depending on how they exited the program. Clients who successfully completed the program tend to be released without supervision. In contrast, most unsuccessful clients are either incarcerated or placed on probation after being released from the DRC. This indicates that the manner in which clients exit DRCs has important consequences for client outcomes, and reveals that in many cases an unsuccessful completion results in a custodial placement.

Table 6: Manner and Timing of Exit for Direct-Sentence Clients Terminated in 2011 (N = 2,030)

	n	*%*	*Average Stay (Days)[a]*
Successful Completion	1038	51.1	262
Unsuccessful Completion			
New Crime	73	3.6	236
Technical Violation/Revocation	84	4.1	190
Absconded/Capias	25	1.2	220
Program-Initiated Termination	469	23.1	215
Client-Initiated Termination	85	4.2	196
Transfer	62	3.1	222
Other[b]	194	9.6	359
Total	2030	100.0	252

Note: [a] Length of stay is not available for 74 clients or 3.6 % of the sample. These clients are not included in the calculation of average stay. The "other" category includes clients who were released from DRC custody (usually due to the expiration of the sentence) but were judged to have not successfully completed the DRC program by staff.

Table 8 examines how the rates of successful program completion vary across groups of clients with different characteristics. It also reports the results of a chi-square analysis. This analysis provides several insights into the potential sources of client success. First, it reports that completion rates are significantly lower for younger and unemployed clients as well as those sentenced to a DRC for a felony or property offense. In addition, the data presented in Table 8 indicates that clients who spend shorter periods of time in DRC custody and who are assessed at higher risk are also significantly less likely to successfully complete the program. The largest differences in completion rates are observed when comparing clients at different risk assessment levels. The program completion rate is about 81% for very low risk clients compared to only about 35% of those who are deemed to be high risk.

We also estimate a multivariate logistic regression model for the likelihood of successful program completion. Table 9 presents the coefficient estimates along with the Wald chi-square statistic. In addition, to assist in the interpretation of the regression coefficients and the effect size, we also present the odds ratios for each variable in the model.

The results of the model indicate that six variables have a statistically significant effect on the likelihood of program completion—when the controlling for the confounding effects of other factors. First, the sign and significance of the age variable indicates that older clients are more likely to complete the program than younger clients. The odds ratio for this variable is 1.025, meaning that for each additional year in age the odds of successful program

Report Highlights...

Fifty-one (51%) of the clients in the sample completed the program successfully.

Most unsuccessful clients were removed from the program as a result of a program-initiated termination or because of a technical violation or revocation of probation.

In addition, about 3.6% of clients were removed from the program due to an arrest for a new crime.

Roughly 46.5% of unsuccessful clients were transferred from the DRC directly into the custody of a prison or jail.

On average, clients in the sample spent 252 days in DRC custody, with successful clients staying about 20 more days in the program compared to unsuccessful clients

completion increases by approximately 2.5% on average. The coefficient for the females is strong and negative, meaning female clients are significantly less likely to complete the program. The odds ratio is 0.737, resulting in females being 26% less likely to complete the program compared their male counterparts. Felony and property offenders are also significantly less likely to complete the program successfully compared to other clients. The odds of successful completion decrease by about 37% for

Table 7: Post-Release Supervision Status of Direct-Sentence Clients by Manner of Exit from the DRC (N = 2,030)

Manner of Exit	No Supervision		Probation		Incarcerated		Other[a]		Total	
	N	%	N	%	N	%	N	%	N	%
Successful Completion	670	64.5	286	27.6	0	0.0	82	7.9	1,038	100.0
Unsuccessful Completion	121	12.2	166	16.7	462	46.5	245	24.7	992	100.0
Unsuccessful Completion, by Type										
New Crime	2	2.7	1	1.4	64	87.7	6	8.2	73	100.0
Technical Violation/Revocation	11	13.1	8	9.5	57	67.9	8	9.5	84	100.0
Absconded/Capias	0	0.0	1	3.8	3	11.6	21	84.6	25	100.0
Program-Initiated Termination	31	6.7	61	12.9	286	60.5	91	19.9	469	100.0
Client-Initiated Termination	18	21.2	9	10.6	44	51.8	14	16.4	85	100.0
Transfer	2	3.2	43	66.1	1	1.6	18	29.1	62	100.0
Other	57	30.5	43	23.0	7	3.7	87	42.8	194	100.0

Note: [a] "Other" category includes clients whose post-release supervision status was unknown, clients under home confinement only, and clients under parole supervision.

Table 8: Client Characteristics and Rates of Program Completion for Direct Sentence DRC Clients Terminated in 2011 (N = 2,030)

	# Successful Completion	% Successful Completion	df	χ^2
Age (mean = 32.01, SD = 9.88)				
Under 20	57	50.4	2,027	28.657***
20-29	404	45.6		
30-39	318	52.3		
40 and Over	258	61.3		
Race				
White	965	51.3	2,029	0.201
Minority	48	49.2		
Gender				
Male	771	51.7	2,029	0.749
Female	267	49.5		
Living Situation				
Living Alone	197	56.9	1,955	7.323
Living with Spouse/Partner	349	53.9		
Living with Parents	419	49.2		
Other Living Situation	73	49.9		
Employment Status				
Full-Time/Part-Time Job	492	57.1	1,899	14.389***
Unemployed	503	48.4		
Education Level				
Did Not Graduate H.S.	283	49.0	1,786	2.950
Completed H.S.	646	53.4		
Placement Offense (Type)[a]				
Person	248	53.7	2,027	50.703***
Property	242	40.4		
Drug	219	52.1		
Public Order	247	62.8		
Placement Offense (Class)[b]				
Misdemeanor	631	55.5	1,703	18.617***
Felony	248	44.7		
Prior Convictions (mean = 1.81, SD = 3.95)				
None	548	50.8	2,027	4.863
1 Prior Conviction	160	56.3		
2 - 5 Prior Convictions	251	50.5		
6 + Prior Convictions	79	46.2		
Length of Stay (mean = 252.4, SD = 202.2)				
Less than 90 days	193	43.7	1,953	25.456***
90 - 180 days	208	47.6		
181 - 365 days	357	58.5		
366 + days	274	51.7		
LS/CMI Risk Score (mean = 17.9, SD = 7.6)				
Very Low	38	80.9	1,487	66.504***
Low	145	63.6		
Medium	324	55.7		
High	221	41.5		
Very High	35	34.7		

Note: * p < 0.05, ** p < 0.01, *** p < 0.001. [a][b] Statistics are calculated using the most serious offense for each client. Felonies are considered more serious than misdemeanors. Person offenses are considered the most serious type of offense, followed by property offenses, drug offenses, and public order offenses.

felony offenders and by about 38% for property offenders.

As suggested by previous research on community-based treatment, the odds of successful completion increase as clients spend longer periods of time in the program. On average, each additional day in the program increases the odds of completion by about 0.1%. While this effect may seem small, it can become quite substantial over time. For example, the model predicts that retaining a client in the program for an additional 6 months increases the odds of successful completion by about 18%.

Finally, clients with higher risk assessment scores are significantly less likely to successfully complete a DRC stay. For each additional one-point increase in the total risk, the odds of successful completion decreases by about 5% for clients. Thus, the average client with a total risk score of 24 (i.e., the mean score for high risk clients in this sample) is about 80% less likely to complete the program compared to clients with a score of 8 (i.e., the mean for low risk clients in the sample).

To further determine the model's fit for successful program completion, the results of an area under the curve (AUC) analysis are also reported in Table 9. This test statistic is simply the ratio of correct to incorrect prediction outcomes generated by the model. The AUC statistic for the model is 0.695, indicating that the model predicted 69.5%

of outcomes correctly. Prediction models are generally considered to be effective with AUC statistics close to 0.7.

Table 8 also reports the Wald chi-square values for each of the variables in the model. The Wald statistic is a measure of the strength of each regression coefficient. As such, the Wald statistic indicates how much each individual variable contributes to the total explanatory power of the model, with larger values indicating a larger contribution. As shown in Table 8, the total LS/CMI risk score is by far the most powerful predictor of program completion. The Wald value of 30.954 is three times the size of any another variable in the model, with the exception of length of stay (Wald = 13.721). The results of an AUC analysis not reported here showed that the LS/CMI total risk score by itself correctly predicted 62% of the variation in program completion (AUC = 0.621). Therefore, all other model variables explain only 7% of the variation in successful program completion not accounted for by risk score. This is an important finding, as it suggests that the LS/CMI risk assessment tool effectively predicts client success (and failure).

The results in Table 9 therefore indicate that length of stay and risk assessment scores are the two most powerful predictors of successful program completion. In light of this finding, and the practical importance of these variables for practitioners, we provide an additional illustration of the effects for these two variables in Figure 5. This figure presents the rates of successful program completion for clients with varying risk scores and lengths of stay. The red line describes the completion rates for high risk clients, the orange line depicts the completion rates for medium risk clients, and the green line shows the completion rates for low risk clients.

As shown in Figure 5, the rate of successful completion increases over time for all risk groups; however, the effect is greatest for high risk clients. For example, nearly 65% of low risk clients that left a DRC program after 3 months experienced a successful termination. For low risk clients that remained in DRC custody for a full year, however, the rate of successful completion increased to about 75%. In contrast, only about 20% of high risk clients that left a DRC after 3 months were successfully terminated. Yet, for high risk clients that stayed in a program for a full year, the successful completion rate was nearly 55%, an increase of 35 percentage points. Hence, longer lengths of stay appear to be very important for resulting in successful program completion for high risk offenders.

Successful Program Completion and Recidivism

Investigation into the causes of successful program

Report Highlights...

The two most powerful predictors of successful program completions are client LS/CMI risk score and length of stay in the program, after controlling for other client characteristics.

On average, a 1 point decrease in a client risk and needs scores increases the odds of successful program completion by about 5%.

Each additional day in the program increases the odds of successful program completion by about 0.1% on average.

Age, gender, as well as the type and severity of placement offense impacts program completion, with older, male, misdemeanant, and non-property offenders having a greater chance of success.

Clients are *less* likely to complete DRC programs if they are younger or female, or if sentenced to the DRC in response to a felony or property offense.

Table 9. Logistic Regression Estimates for Predictive Factors Associated with Successful Program Completion

Variable	B (SE)	Wald	Odds Ratio
Age (years)	0.025*** (0.007)	11.150	1.025
Female	-0.306* (0.148)	4.253	0.737
Minority	-0.225 (0.246)	0.833	0.799
High School Graduate	-0.049 (0.144)	0.116	0.952
Unemployed	-0.084 (0.138)	0.367	0.920
Living with Spouse/Partner	-0.146 (0.180)	0.652	0.865
Living with Parents	-0.208 (0.179)	1.359	0.812
Felony Placement Offense	-0.459*** (0.142)	10.445	0.632
Property Offense	-0.478*** (0.145)	10.797	0.620
Number of Prior Convictions	-0.028 (0.016)	3.348	0.972
Length of Stay (days)	0.001*** (0.0001)	13.721	1.001
LS/CMI Risk Score	-0.052*** (0.009)	30.954	0.949
Constant	0.622 (0.376)	2.734	1.862
Number of Cases (n)	1082		
AUC Analysis	0.695		
-2 Log Likelihood	1999.76		
Nagelkerke Psuedo R^2	0.149		

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.00$

Figure 5. Rate of Successful Program Completion for Direct-Sentence Clients by Length of Stay and LS/CMI Risk Score
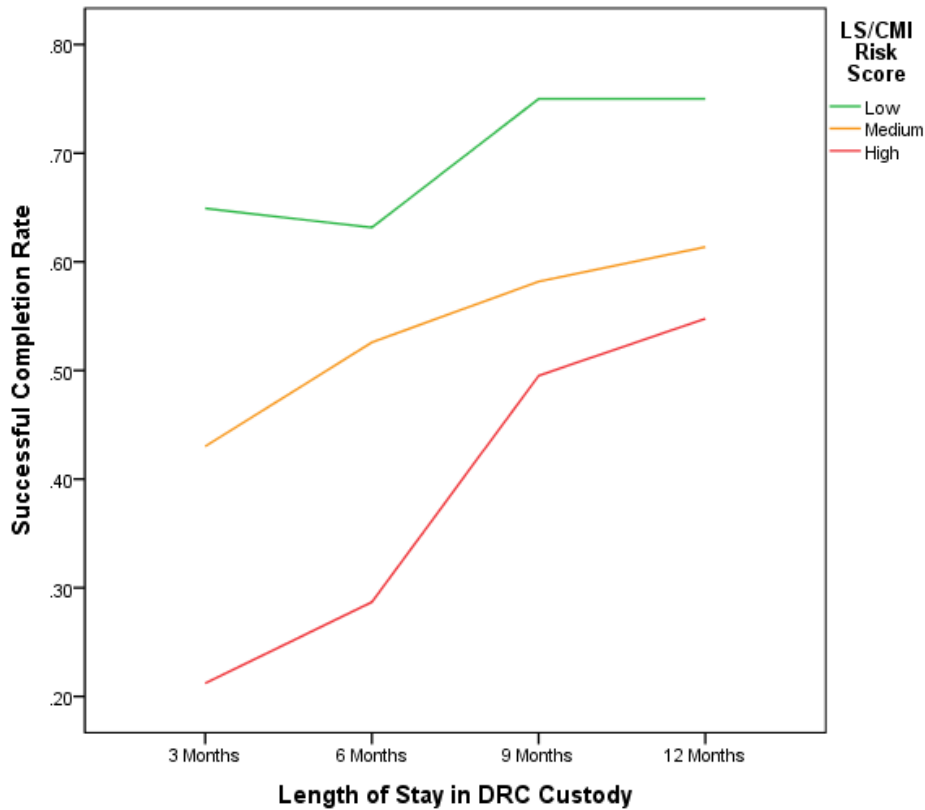
completion is important because failure to complete one's program is believed to be a powerful predictor of recidivism for DRC clients. While this report stops short of providing a full investigation of the causes of recidivism, we conclude with a preliminary comparison of recidivism rates by type of program completion (i.e., successful vs. unsuccessful). It should be noted that this comparison includes only those clients who were at risk of recidivating during the 24 month follow up period. It therefore excludes 462 clients who were incarcerated immediately after termination, 62 clients who were transferred into the custody of other DRC programs and 5 clients who were terminated from the program due to death.

As can be seen in Table 10, only about 24% of clients that successfully complete a DRC program are subsequently booked into a regional jail within two years. This is compared to a booking rate of about 43% for clients unsuccessfully terminated by a DRC. The difference in booking rates between these two populations is statistically significant at the p < 0.001 confidence level. Of course, while this initial bivariate analysis does not take into account the influence of other confounding factors, it does provide some evidence that successful program completion results in a lower probability of recidivism.

To further explore the relationship between program

Report Highlights...

Twenty-four percent (24%) of successful program participants recidivated within two years of release, compared to 43% of unsuccessful clients.

The difference in recidivism rates for successful and unsuccessful clients is statistically significant at the p < 0.001 confidence level.

Successful program participants are significantly *less* likely to recidivate during the first 6 months post-release.

completion and recidivism, we also compare the time to first booking by type of termination. The results in Table 11 clearly indicate that program completion impacts time to recidivism. Successfully terminated DRC clients are significantly less likely to be booked during the initial 6 months post-release. During the first 6 months of post-release, the recidivism rate for successfully terminated clients is 35% compared to 51% for clients that did not complete the DRC program. This result is statistically

Table 10. Rates of Recidivism by Type of Program Completion for the 24-Month Period after DRC Termination (N = 1,495)

Recidivism	Successful Completion		Unsuccessful Completion	
	n	*%*	*n*	*%*
Yes	247	23.9	196	42.9
No	790	76.1	261	57.1
Total	1038	100.0	457	100.0

Note: χ^2 = 54.841; $p < 0.001$. Recidivism measure captures any instance in which an offender was booked into a regional jail.

Table 11. Number of Successful and Unsuccessful DRC Clients Recidivating over Time (N = 443)

Time Period	Successful Clients		Unsuccessful Clients	
	n	*%*	*n*	*%*
6 Months	86	34.8	102	52.1
6 - 12 Months	61	24.7	45	22.9
12 - 18 Months	70	28.4	29	14.8
18 - 24 Months	30	12.1	20	10.2
Total	247	100.0	196	100.0

Note: χ^2 = 75.360; $p < 0.001$. Recidivism measure captures any instance in which an offender was booked into a regional jail.

significant at $p < 0.001$. Thus, successful completion of a DRC program may change the patterns of recidivism over time, and help clients to abstain from committing new crimes during their first 6 months after release.

DISCUSSION AND CONCLUSIONS

Policy Implications

This study examined the factors predictive of successful program completion, and the relationship between client success and recidivism. It uncovered several statistically significant predictors of client success. Two most powerful predictors were clients' risk scores and their length of stay in DRC custody. This report also found that clients who successfully completed their programs were much *less* likely to recidivate during the 2 year follow up period. These results have several implications for DRC administrators and staff as well as state planners and policymakers.

First and foremost, the results clearly demonstrate that successful program completion is associated with less recidivism. Therefore, increasing the number of clients

that successfully complete their stay in a day report center should be a fundamental goal for DRC administrators, staff, and state policymakers. During the 24 month follow-up period, clients who completed the program successfully had a recidivism rate of 24%, compared to nearly 43% for clients with unsuccessful terminations. Furthermore, this recidivism rate for unsuccessful clients does *not* include the 462 clients unsuccessfully terminated or transferred directly to state prison or jail custody at the time of release. Consequently, the "true" rate at which unsuccessful clients are involved in the state's criminal justice system is much greater. In total, roughly 75% of unsuccessful clients are either incarcerated immediately after termination or are booked into a regional jail for new offenses within 24 months. Thus, the question of how many clients complete their DRC programs successfully is one which has important consequences for the effectiveness of DRC programming, and ultimately for issues such as prison overcrowding and public safety. Given that only about half of the clients in the sample completed the program successfully, there is room to make significant improvements in this area.

Second, the results of this study shed light on how program administrators and staff might increase program completion rates. For instance, longer lengths of stay is significantly related to successful program completion. This underscores the importance of efforts by DRC administrators and staff to enhance various retention techniques, including the proper use of reinforcements/incentives and motivational interviewing and case management strategies. Prior research has consistently documented the importance of such techniques for producing behavior change (Harper & Hardy, 2000; Miller and Rollnick 2002). By encouraging struggling clients to continue participating, staff may be able to buy the time necessary for treatment programs to take effect and for client attitudes and behavior change to occur.

In addition, this study found that the strongest predictor of program failure was client risk scores. As client risk scores increased, so did the likelihood of program failure. This is wholly consistent with what is to be expected based on previous research, and serves as a partial validation the LS/CMI tool itself (Holsinger, 2013). Consistent with the risk principle, this finding confirms that staff time is best spent targeting high risk offenders with intensive services in order to improve program completion rates and reduce recidivism (Bourgon and Armstrong, 2005). Given that most program failures tend to occur earlier rather than later (as this study confirms), this highlights the need for routine assessment of client risks while in the program, and soon after release if they remain under supervision. By doing so,

staff may be able to prevent early program failures bamong high risk clients. Thereby, increasing successful completion rates and improving program outcomes (i.e., recidivism).

Third, this report has implications for sentencing practices. In particular, the finding that high risk clients derived the greatest benefit from longer lengths of stay implies that judges can play a key role in improving successful completion rates and reducing recidivism among DRC clients. This clearly suggests that consideration of risk and needs scores during the judicial process may lead to better outcomes for both the client and the public. Prior research tells us that high risk offenders must receive greater dosage in terms of both treatment and supervision contacts (Andrews, Bonta and Hogue, 1990; Dowden and Andrews 2000; Lipsey, Landenberger and Wilson, 2007). This often necessitates longer lengths of stay (i.e., duration) and intensity in programming. Hence, this report provides evidence that risk scores matter, and that the risk principle should be adhered to by program staff and considered in court processes and judicial decision-making.

Finally, this report contains potential implications for gender-specific programming and the range of interventions offered to DRC clients. Our findings illustrate that female clients have different criminogenic needs than male clients. Other studies have found this as well (Salisbury, Van Voorhis, & Spiropoulis, 2009; Van Voorhis, Wright, Salisbury and Bauman, 2010). In addition, females were significantly less likely to complete the DRC program compared to their male counterparts after controlling for other factors. While this study did not allow for a complete examination of gender differences, this finding accentuates the need for programs to be responsive to the unique needs of female clients (e.g., a greater emphasis on family/marital needs).

In terms of the range and availability of interventions, our results found that 40% of all interventions provided to clients in DRCs were related to substance abuse. While many clients were identified as having substance abuse dependence/ addiction problems, the prevalence of these interventions appears somewhat disproportionate to the full range of needs displayed by DRC clients. For instance, far fewer interventions were noted for family/marital and education/ employment issues, as well as basic problem-solving, anger management, and coping skills. Given that prior research has shown that substance abuse treatment has a much smaller impact on recidivism than interventions designed to address other criminogenic needs such as procriminal attitudes and associates, this is somewhat of a concern (Lowenkamp et al., 2006; Lipsey et al., 2007). Consequently, our results

Report Highlights...

Efforts to improve successful program completion rates are likely to be rewarded with substantial decreases in recidivism.

DRC staff can improve successful completion rates by working to keep clients in programs longer and by focusing retention efforts on high risk clients.

Taking the results of risk assessments into account when determining the length of DRC sentences can improve successful completion rates. High risk clients are more likely to benefit from longer sentences than low risk clients.

DRC programs should be responsive to gender differences and place greater emphasis on skill-based interventions (e.g., problem-solving, impulse control, attitudes, etc.) in addition to substance abuse treatment to improve completion rates.

imply that program outcomes could be improved with greater emphasis on other types of interventions, such as individual counseling or cognitive-behavioral therapy.

Implications for Research

This report makes three important contributions to community corrections research. First, it is one of only a handful of studies to investigate successful program completion as a dependent variable. Our analysis supports the findings from prior studies in regards to risk scores (Holsinger, 2013) and length of stay (Kim et al., 2008) for predicting client success, while addressing a few limitations of those studies. This study improved upon prior studies by a) examining a much larger sample of DRC clients, b) estimating both bivariate and multivariate statistical models, and c) incorporating new explanatory variables that had not been considered before (i.e., education level, employment status, type of placement offense, and so forth). Hence, this study contributes to an emerging body of work on sources of client success while accounting for limitations found in previous studies.

Second, this report also adds to a growing literature which investigates the relationship between treatment dosage and client outcomes. Studies in this area have generally argued that greater treatment dosage is associated with better client outcomes, particularly for offenders with high risk and needs (Lowenkamp, Latessa, & Holsinger, 2006; Sperber et al., 2013). The results of this report confirm those expectations, but do so using a new dependent variable—successful program completion—which has not been examined in this way. Hence, our findings emphasize the impact of different levels of treatment dosage on client outcomes and behaviors that occur while clients are still in DRC custody. This is a novel addition to the dosage literature, as most studies in this area have focused exclusively on recidivism outcomes that occur after release (e.g. Lipsey, 1999; Bourgon & Armstrong 2005). As a result, this study also draws connections between the dosage literature and other research which has examined the pre-release behavior of offenders. In doing so, it identifies a promising new area for future research.

Third, this study has implications specific to evaluation research in day report centers. Our results suggest that future research should take into account successful program completion when assessing the effectiveness of DRC programs. Given that successful clients appear to be much less likely to recidivate, failure to incorporate this measure into recidivism studies may introduce bias. That is, omitted variable bias could potentially introduce error in estimates of program effectiveness. Moreover, since many unsuccessful terminations result in clients being transferred directly into the care of a correctional facility, this variable represents an important outcome of interest in its own right, especially for evaluators concerned with the impact of community corrections programs on the size of state prison populations.

Future Research

The results of this study point to several promising avenues for future research. First, future studies should examine the relationship between successful program completion and other outcome measures, such as arrests for new crimes, convictions or incarcerations. Likewise, more attention to the impact of successful program completion within the context of multivariate models might be warranted. In this regard, it would be particularly useful to know how the effects of program completion varies across clients with different risk and needs or different lengths of stay in the program.

A better understanding of the time to recidivate in relation to different recidivism measures would also be helpful. Consistent with other research (i.e., Huebner and Berg, 2011), we found that successful clients were much less likely to recidivate during the initial 6 months post-release. It would be worthwhile to determine whether this trend is also evident when examining different measures of recidivism. This focus may help program administrators and policymakers better identify and understand the barriers that arise shortly after release and how to address them.

Finally, the field could benefit from research which examines the relationship between successful program completion and program characteristics, such as program size, quality or fidelity, and funding levels. While this report focused on identifying offender characteristics associated with client success, it is likely that aggregate *program characteristics* may also have an impact on rates of success. Future studies should examine these relationships and explore how they interact with offender characteristics to impact program effectiveness. Likewise, it would be very useful to know the extent to which high rates of successful completion are correlated with measures of program quality, such as those produced by assessments like the Correctional Program Assessment Inventory (CPAI) or Correctional Program Checklist (CPC).

In sum, this report delivers an important contribution to the ongoing efforts of scholars and practitioners to understand the complex sources of success for DRC clients. This work has the potential to greatly enhance the impact of DRCs because it points to ways in which staff can improve the

effectiveness of programming and services. By increasing the rate of successful program completion, staff can make it more likely that clients will benefit from their time in DRC custody and thereby reduce the risk to the public.

ENDNOTES

1. Client-initiated terminations typically refer to instances where clients were initially given the option of participating in the DRC as an alternative to incarceration or some other sanction, but then decided to leave the DRC and accept the other punishment.

2. Many of terminations that were classified as "other" referred to clients who were judged by DRC staff as having failed to successfully complete the program (usually because they violated program rules or did not achieve certain goals) but nonetheless had to be released because they had served the full duration of their sentence. Clients from this group therefore tended to have a relatively long length of stay.

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