

_____ **Research Report** _____

**The Additive Effects of Women
Offenders' Participation in Multiple
Correctional Interventions**

Ce rapport est également disponible en français. Pour en obtenir un exemplaire, veuillez vous adresser à la Direction de la recherche, Service correctionnel du Canada, 340, avenue Laurier Ouest, Ottawa (Ontario) K1A 0P9.

This report is also available in French. Should additional copies be required, they can be obtained from the Research Branch, Correctional Service of Canada, 340 Laurier Ave. West, Ottawa, Ontario K1A 0P9.

**The Additive Effects of Women Offenders' Participation in Multiple Correctional
Interventions**

Geoff Wilton

&

Lynn Stewart

Correctional Service of Canada

February 2015

Acknowledgements

The authors would like to acknowledge the role of staff from the Reintegration Programs Division, the Aboriginal Initiatives Directorate, and the Women Offenders Sector who contributed to the design and details of the methodology used in the study. Jennie Thompson provided invaluable assistance in the form of consultation on statistical procedures. We also wish to thank Dena Derkzen and Andrea Moser for feedback on an early draft of this report.

Executive Summary

Key words: reoffending, multiple interventions, women's correctional programs, correctional outcomes

In the Correctional Service of Canada (CSC), in addition to correctional programs, many other services and interventions are provided to women offenders to prepare them for release into the community and, ultimately, to reduce their risk to reoffend. Some of these services include employment and employability programs, educational programs, mental health programs and services, chaplaincy, prison visits, and social programs. While there is evidence suggesting that these types of interventions can have a positive impact on women's rehabilitation and reintegration, there is very little research that attempts to disentangle the relative contribution of participation in multiple interventions or services on women's outcomes. Since in CSC multiple correctional interventions and services are offered throughout the course of offenders' sentences, it is important to examine the extent to which these services provide "additive effects," that is, further improve the outcomes of offenders who participate in correctional programs. This study, therefore, determined the relative contribution of key services and interventions to rates of revocations of conditional release of federally sentenced women.

All federally sentenced women admitted to the custody of CSC between September 2009 and August 2013 and released prior to April 13th, 2014 were included in the study ($N = 918$). The research design first controlled for differences between women offenders based on factors related to offending. Beginning with a control model subsequently applied to all analyses, interventions including CORCAN and CSC employment, education programs, vocational certificates, community employment centre services, prison visits, community correctional programs, and maintenance programs were added, first on their own, then all interventions significantly contributing to outcomes were added together in the final model.

Previous research on federally sentenced men had found encouraging results with respect to CSC's overall approach to their rehabilitation. Likewise, this study on federally-sentenced women also found that the combination of services and interventions produced outcomes that significantly improved their chances of success on release. The most promising interventions were: (a) education programs, particularly those that enabled women to get close to obtaining a high school equivalent, (b) participation in community maintenance/booster sessions, and (c) having received at least one prison visit. When all the interventions were included in the model at the same time only prison visits and the number of education courses completed remained uniquely associated with reductions in the rates of revocations.

Based on the results we can conclude that, in addition to correctional programs, other services offered to women offenders in CSC are associated with reduced revocations of conditional release even after controlling for risk factors associated with outcomes. This suggests that there are several methods by which CSC works to improve women's success on release in addition to offering correctional programs.

Table of Contents

Acknowledgements	ii
Executive Summary	iii
List of Tables	v
List of Appendices	vii
Introduction.....	1
The Present Study	5
Method	6
Participants.....	6
Measures	6
Analyses	7
Results.....	10
Control Model.....	10
Employment/Education Model	10
Community Services Model	12
Overall Additional Services Model	13
Discussion	15
Limitations	16
Conclusion	17
References	18
Appendices.....	21

List of Tables

Table 1 <i>Age at Release, Aggregate Sentence Length, and Follow-Up Period</i>	6
Table 2 <i>Cox regression model of control variables predicting survival to revocation</i>	10
Table 3 <i>Employment/Education Factors Associated with Revocations of Conditional Release for Women.</i>	12
Table 4 <i>Association between Participation in Community Services and Rates of Revocations of Conditional Release</i>	13
Table 5 <i>Overall Additional Services Predict Revocations of Conditional Release</i>	14

List of Appendices

Appendix A: Additional Services Variables by Category	21
Appendix B: Variables considered for inclusion in the control model.....	25

Introduction

There is now established evidence on the effectiveness of correctional programs that adhere to the risk, need, and responsivity (RNR) principles for male offenders (Andrews & Bonta, 2010; Andrews, Bonta, & Hoge, 1990; Gendreau, Little, & Goggin, 1996; Lowenkamp, Latessa, & Holsinger, 2006; Usher & Stewart, 2014). But there is also a developing body of research that has demonstrated similarly positive impact for such programs for women (Blanchette & Brown, 2006; Dowden & Andrews, 1999; Lovins, Lowenkamp, Latessa, & Smith, 2007; Tripodi, Bledsoe, Kim, & Bender, 2011). Four systematic reviews, including two meta-analyses examining the impact of women's participation in correctional programs on recidivism rates, have determined that, in general, the programs are effective for women (Gobeil, Blanchette, & Stewart, 2016; Lart, Pantazis, Pemberton, Turner, & Almeida, 2008; Tripodi et al., 2011; Stewart & Gobeil, 2014). In particular, these reviews indicated that programs that addressed women's substance abuse had strong support. There is also preliminary evidence that participation in programs that adhere to the RNR principles, but also include gender-sensitive or gender-informed approaches, may provide additional benefit to girls and women (Bloom, Owen, & Covington, 2006; Gobeil et al., 2016; Stewart & Gobeil, 2015), particularly for those with 'gendered pathways' to crime that include histories of exposure to trauma and abuse (Day, Zahn, & Tichavsky, 2014; Kerig & Schindler, 2013).

A number of studies have examined the impact of women's participation in correctional services other than correctional programs. Millson, Robinson, and Van Dieten (2010), for example, examined a gender-informed case management approach, comparing the results to a matched group of women who received regular probation. Based on a fixed one-year follow-up, women participating in the alternative case management approach were found to be arrested at lower rates than their counterparts being supervised as usual (31.6% vs. 42.5%); the approach appeared to have been more successful for higher-risk women. An early study on the impact of correctional education programs on over 18,000 inmates from Ohio found that the college programs, vocational programs and ABE and higher education programs had a positive effect on women offenders (Anderson, 1995). Another study of incarcerated women examined the relationship of levels of support from religious services to measures of institutional outcomes and found that inmates who received high-level support reported significantly less depression,

perpetrated fewer aggressive acts, and committed fewer serious institutional infractions than those who did not attend religious activities as well as those who attended but reported receiving low-level support (Levitt, & Loper, 2009). In a large-scale study of the impact of prison visits, on federally sentenced offenders in Canada, about 5% of the sample included women (Derkzen, Gobeil, & Gileno, 2009). The researchers found that women were more likely to receive a visit than men, but they did not disaggregate the outcomes results by gender after determining that gender was not significant in the regression analyses. They concluded that, for the total sample, the number of visits was significantly positively related to outcome. This is counter to an American study that failed to find an impact of prison visits for women (Bales & Mears, 2008). A study of the Dialectical Behaviour Therapy (DBT) intervention in the Correctional Service of Canada (CSC) showed a number of improvements in psychological function among participants, but did not examine the program's outcome on recidivism (Blanchette, Flight, Verbrugge, Gobeil, & Taylor, 2011).

The Correctional Service of Canada is mandated through the Corrections and Conditional Release Act (CCRA; 1992) to assist in the rehabilitation and reintegration of offenders into the community through the provision of programs. The Program Strategy for Women Offenders requires that programming follow empirically supported elements of the risk-need-responsivity (RNR) model within a gender-responsive framework. Programs should be women-centered, holistic, and acknowledge the diversity of women offenders within a supportive environment (Booth, 2012). Since 2010, CSC has implemented a comprehensive model of women offender correctional programming (WOCP) the overall goal of which is to provide a holistic, women-centred model of programming while enhancing accessibility and participation, and facilitating offender reintegration. The program is consistent with the overall philosophy of women's corrections in CSC since the 1990 publication of the Creating Choices Task Force document which provided a road map for the delivery of women's correctional services within the federal system.

Along with correctional programs, many other services and interventions are provided to federally sentenced women in the institutions and the community to prepare them for release into the community and, ultimately, to reduce recidivism. These services include: employment and employability programs (e.g., CSC institutional employment, vocational certification), educational programs (e.g., Adult Basic Education, GED), chaplaincy, family visits, mental health programs such as Dialectical Behaviour Therapy (DBT), trauma and abuse counselling,

and various social programs. In addition, the Structured Living Environment (SLE) units provide a therapeutic environment for women with cognitive difficulties and/or mental health needs who require more support and supervision. In these units, women can participate in specific mental health programming such as DBT (Blanchette et al., 2011). For Aboriginal women within CSC, there are culturally-specific programs and services options available. These include participation in the Pathways living units introduced in 2010 that are designed as a special healing environment within an institution offering services that reconnect offenders to the Aboriginal culture and philosophy, sessions with Aboriginal Elders, and participation in cultural ceremonies. For women who qualify, residency in healing lodges run by CSC or by Aboriginal agencies under Section 81, and releases to the supervision of Aboriginal communities under Section 84 are options.

Women currently comprise about 4% of the federal offender population (Public Safety Canada, 2014). Although they have substantial needs across domains including unstable employment histories, high levels of mental health problems, and histories of serious substance abuse, their revocation and recidivism rates are lower than those of men in CSC (Thompson, Forester, & Stewart, 2015). Small sample sizes and lower reoffending rates make it challenging to establish the effectiveness of CSC interventions in reducing women's recidivism rates due to reduced statistical power (Statistical power is the likelihood that a study will detect a treatment effect when there is one. It is affected chiefly by the size of the difference between the outcomes of the treatment and comparison groups and the size of the sample. In correctional research, when both the treatment and comparison groups have low rates of reoffending, it becomes difficult to detect a significant change/improvement. Large sample sizes would be necessary, and this is not commonly the case with research involving women offenders.).

To date, within CSC, only the women offender substance abuse program has identified significant treatment effects for women participating in the substance abuse program combined with the community maintenance program (Matheson, Doherty, & Grant, 2009). Matheson and colleagues reported on the outcome of the Women Offender Substance Abuse Program (WOSAP), a 68-session gender-responsive, holistic, trauma-informed program that included cognitive-behavioural therapy, relational theory relapse prevention, and harm reduction approaches. The researchers first examine outcomes of women who participated in the in-custody component of the program and compared them to those who completed only the

introductory and/or relapse prevention sections ($n = 134$), as well as comparing them to a group of women who completed an historical, previously-available program ($n = 108$), described as gender-neutral. Results indicated that rates of return to custody within one year of release while lower for those who completed the intensive in-custody part of the program compared to the introductory and/or relapse prevention sections only and those who completed the previous program (39%, 43%, and 47% respectively), the difference was not statistically significant (Matheson et al., 2009). However, when Matheson and her colleagues also compared the recidivism outcomes of women who completed the in-custody and also participated in its 20-session Community Relapse Prevention and Maintenance sessions ($n = 305$) to those who did not ($n = 56$) the odds of being reincarcerated in the year following release were more than 10 times greater for the women who did not participate in the community aftercare program relative to those who did. In addition, participants also remained in the community significantly longer prior to reincarceration.

Additional research has been conducted to examine the effectiveness of gender-informed programming within CSC, albeit it with limited success given the numerous methodological challenges including small sample sizes, low base rates of reoffending, and limited follow-up periods upon release. These issues have precluded a statistically rigorous assessment of outcomes for gender-informed programming within CSC (Harris, Thompson, & Derkzen, in preparation; Rubenfeld, Trinneer, Derkzen & Allenby, 2015).

Although there is a growing body of literature looking at the impact of participation in a single correctional intervention, we found no other research that attempted to disentangle the relative contribution of participation in multiple interventions or services on women's outcomes on release. Examining the impact of the services provided within CSC, both individually and in combination with other services, is important to planning and the allocation of resources.

Recent research using the same methodology as the present study with federally sentenced men found that the combination of services and interventions explored produced outcomes that significantly improved offenders' chances of avoiding revocations on release after risk variables and program participation variables were considered (Wilton, Nolan, Stewart, & Thompson, in approvals). The results indicated that the most promising interventions were: education programs, particularly those that enabled offenders to get close to obtaining a high school equivalent; correctional interventions completed in the community (those who completed these programs were 4 times less likely to revoke on conditional release); prison visits, both prison visits and PFVs were

associated with reduced revocations of conditional; and the number of elder reviews (for Aboriginal men). The research confirmed that additional services were associated with reduced revocations of conditional release while controlling for factors related to offending, and multiple additional services were not redundant with one another. The results provided support for CSC's overall approach to the provision of programs and services to men while they are in custody and in the community under supervision.

The Present Study

The present study examined the impact of additional services on federally sentenced women. Since the reality of women's circumstances in CSC is that correctional programs are offered in conjunction with multiple correctional interventions and services throughout the course of their sentences, it is important to examine the extent to which these services provide "additive effects," that is, further improve the outcomes of offenders who participate in correctional programs. The purpose of the present study is to determine the relative contribution of key services and interventions to rates of first revocation of federal offenders who have participated in correctional programs. The study was not able to assess the impact of all the services offered to women in CSC given it was limited to only the services that involved an adequate number of women to allow analysis. This project addressed the following research question: "Are additional services including institutional employment, educational, prison visits and correctional interventions delivered in the community simultaneously associated with reduced rates of revocations of conditional release among federally sentenced women?"

Method

Participants

The cohort for this study consisted of all federally sentenced women admitted to the custody of CSC between September 2009 and August 2013 and who were released on day parole, full parole or statutory release (SR) prior to April 13th, 2014 ($N = 918$). Of these offenders, 71% (656) were non-Aboriginal and 29% (262) self-identified as Aboriginal. Most (69%, 629) were released on parole, the rest (31%, 289) were released on statutory release. The first conditional releases of 27% (250) of the women resulted in a revocation. Only 8% (72) were revoked with an offence. Given the low rates of reoffending, the outcome analyses were based on revocations for any reason.

Table 1 displays the medians, standard deviations and ranges for the offenders' age at release, aggregate sentence length, and follow-up time¹.

Table 1

Age at Release, Aggregate Sentence Length, and Follow-Up Period

Variable	Median	Standard Deviation	Range
Age at release (years)	33	10.7	18 to 76
Aggregate Sentence Length (years)	2.3	1.1	2 to 12
Follow-up time (days)	302	238	2 to 1,235

Measures

Data were collected from the Offender Management System (OMS). OMS is the official electronic record for all federally-sentenced offenders in Canada. Variables were selected to measure the outcome of first revocation of conditional release on the sentence, the additional interventions and services, and the control variables.

The outcome variable was offenders' first revocation of conditional release following the first term of incarceration. In addition to assessing whether the offenders were revoked or not the outcome analyses also examined the time to revocation. To conduct this analysis, a follow-up time variable was required. Follow-up period was calculated as the number of days from the offender's release to the earliest of the following events: first readmission to federal custody

¹ See below for the calculation of the follow-up period.

while on conditional release, the offender's warrant expiry date, the data collection date of April 13th, 2014, or date of the offender's death or deportation. The follow-up time and revocation variables together constituted the outcome of the Cox regression analyses described below.

The measures of the additional services and interventions were categorized by participation in (a) CORCAN employment programs, (b) CSC employment, (c) education programs, (d) vocational certificates, (e) Community Employment Centre services, (f) prison visits, (g) Nationally Recognised Correctional Programs (NRCPs) delivered while in the community, and (h) maintenance programs while incarcerated and also while in the community. Most of the categories were measured in several ways. Appendix A contains a description of each of these interventions and a list of all the variables measuring each intervention.

The above measures of additional services and interventions were examined while statistically controlling for key variables known to be associated with offenders' outcomes on release including: static risk, criminogenic need (i.e., dynamic risk), and offender and sentence characteristic variables. Appendix B describes these variables and lists all the variables explored for inclusion in the control model.

Analyses

Cox regression, a type of survival analysis, was the main analytical technique applied in the study. This technique allows variables to be entered into predictive models of the outcome. The effect size associated with Cox regression is the hazard ratio. Hazard ratios indicate the change in the rate of revocations of conditional release that is associated with a one unit change in the variable being examined. A hazard ratio of 1 indicates no effect of the particular variable on revocations of conditional release. A value greater than 1 indicates that the rate of revocations increases as the units of the variable increase, and a value less than 1 indicates a decrease in the rate of revocation.

Analyses proceeded in three stages. In stage one, a set of variables related to outcomes on release that had to be statistically controlled was identified. In stage two, the measures of individual additional interventions and services with the strongest relationship to outcome were identified, and, finally, in stage three models including several interventions and services were developed.

Stage one data analysis. To begin we had to ensure that differences between women who participated in interventions and those who did not were due to the interventions and not to

differences in the characteristics of the women who participated and those who did not. The development of the control model was driven by theory (i.e., a literature on variables related to outcomes on release) and the strength of the relationship of the variables with revocations. Potential control variables were selected from those listed in Appendix B. Generally, the potential control variables represented five broad areas: criminal history risk, criminogenic needs, sentence and offender characteristics (such as age and ethnicity), offender behaviour while incarcerated, and participation in, and completion of, NRCPs.

The strength of the relationship between each of the potential control variables individually and revocations of conditional release was established with Cox regression analyses. The control model building process followed a forward step-wise method. Each step of the model building process consisted of adding the strongest measure of a control variable to the model. If the variable was significant, it was retained in the model. The next strongest variable was then entered into the model and retained if significant. Measures that were entered on previous steps were checked to ensure they remained significant; if not, they were removed. This process continued until no potential control variable could be added to the model and be statistically significant.

The resulting control model is displayed in Table 2. The variables in the control model included (a) the number of institutional charges between admission and release, (b) age at release, (c) release type (parole or statutory release), (d) the number of domains of the Dynamic Factors Identification and Analysis – Revised (DFIA-R) with moderate or high need ratings (0 to 7), (e) overall criminal history risk (low, moderate or high), and (f) Aboriginal self-identity². The control model was included in all Cox regression results presented in this report.

Stage two data analysis. After examining the control variables, all of the measures of the additional services (see Appendix B) were examined individually. They were entered into Cox Regression models alone and with the control model, and the strongest predictors of revocations were identified. These became the candidates in the models.

Stage three data analysis. Three models were developed to examine multiple additional services in the prediction of revocations. One examined the additional impact of employment and education services; the second examined the additional impact of participation in community

² This analysis should not be interpreted to mean that Aboriginal self-identity in itself is criminogenic. Instead, the importance of this variable is likely due to its association with criminogenic factors not otherwise controlled such as level of support and community factors (See Brzozowski, Taylor-Butts & Johnson, 2006).

services. A third model involving all the additional services was developed. This overall model excluded the community services because of the requirement of a period of success³ in the community prior to participating in the programs.

The measures with the strongest statistical result for each additional intervention or service were the candidates for inclusion in the models. For example, there were 13 measures of participation in education programs. Two of these – total number of education courses completed with credits earned and total number of courses completed at the ABE 4 level – had similarly strong results for offenders and were considered for inclusion in the models.

The process to build these models followed a forward step-wise method as was described for the control model. The strongest measures of additional services were added to the control model at each step. Any variables non-significant at the $p < .10$ level other than the control variables were removed. When an additional service had two or three strong predictors, these were each tested and possibly included in the model to find the model that best predicted revocations of conditional release. This process continued until no further measures of the additional services could be added to the model and be statistically significant.

Across all Cox regression models, results are interpreted with regard to the limitations of modeling techniques. The significance of each variable included in a statistical model depends on its unique contribution to the prediction of the outcome. By including the control model in each of the analyses, offenders are statistically made equivalent on those control factors. Subsequently, the results associated with measures of additional services are not confounded by potential differences in the control variables. Adding variables into a model can also reduce the unique explanatory power of the other variables to the point that they are no longer significant. For this reason, variables must be interpreted with consideration of the other variables in the model, especially when variables are related to one another.⁴

We caution that these results are exploratory and may apply only to the federally sentenced women within the cohort of this study. The interventions and services change over time as do the correctional environment, policies, and legislation and these changes could affect the impact of these interventions and the overall results.

³ A minimum follow-up of 50 days was required for the community services model. Other minimum follow-up periods were also examined with similar results.

⁴ Due to the large number of variables measuring the additional services and the multiple control variables, multicollinearity was a potential concern. In all the models presented in this report, there were no issues with multicollinearity indicated by inflated standard error terms, and concern of this limitation is lessened.

Results

Control Model

A control model was developed using variables with an established relationship with revocations and recidivism. The variables considered for inclusion in the control model are listed in Appendix B. The final control model significantly predicted revocations of conditional release for the women offenders (Wald $\chi^2(7, N = 918) = 263.79, p < .001$) and is displayed in Table 2. For example, the Hazard Ratios in the model indicate that Aboriginal women are almost twice as likely to be revoked than non-Aboriginal women (HR = 1.88); and women who were not granted a parole release were twice as likely to be revoked as those released at their statutory release dates (1.98).

Table 2

Cox regression model of control variables predicting survival to revocation

Parameter	χ^2	<i>p</i>	Hazard Ratio	95% Confidence Interval	
Number of institutional charges	31.84	< .001	1.05	1.03	1.07
Age at release	11.55	< .001	0.98	0.96	0.99
Release type (parole or statutory release)	18.08	< .001	1.98	1.44	2.71
Number of criminogenic needs (0 to 7)	21.15	< .001	1.22	1.12	1.33
Criminal history risk rating	11.83	< .001	a	a	a
Aboriginal self-identity (yes/no)	21.97	< .001	1.88	1.44	2.45

^a Note: Results indicated that offenders with a criminal history risk rating of high were significantly more likely to have revocations compared to the low risk offenders ($\chi^2(1) = 11.81, p < .001$, Hazard Ratio = 1.84, 95% Confidence Interval [1.30, 2.60]), and the medium risk offenders were also significantly more likely to have revocations compared to the low risk offenders ($\chi^2(1) = 6.17, p = .013$, Hazard Ratio = 1.68, 95% Confidence Interval [1.12, 2.53]).

Employment/Education Model

Table 3 displays the measures that significantly contributed to the outcome model for the education and employment programs and those that approached significance. Variables examined were: participation in CORCAN employment, CSC employment, education achievements and vocational certificates. The model, with the underlying control variables,

provided a statistically reliable prediction of revocations of conditional release (Wald $\chi^2(9, N = 918) = 270.5, p < .001$). The significant hazard ratios indicate that completion of ABE IV courses was related to reductions in rates of revocations of conditional release and CORCAN employment approached significance showing a trend for an association with reductions of conditional release. Both measures met the proportional hazards assumption.

One quarter of the women (232) had at least one and up to 19 ABE IV course completions. Fifty-seven of these participants (25%) had revocations, while 28% (193) of the 686 women without ABE IV course completions had revocations. Although the percentage revocations among women with ABE IV course completions was similar to the women without ABE IV course completions, part of the significant result was due to the benefit of having several course completions. Among women with 7 or more ABE IV course completions, less than 10% had revocations.

There were 171 (19%) women with CORCAN enrollments, mostly as tailor and textile workers. However, only 55 (6%) women had enrollments of at least 90 working days, and only 5 (9%) of them had revocations. While the indicator of at least one CORCAN enrollment of 90 working days was the strongest measure of CORCAN participation, other measures had similar results. The total number of months in CORCAN employment, the number of different CORCAN jobs, and the number of enrollments in CORCAN also approached significance when entered as the CORCAN measure in the model in Table 3.

Both education and CORCAN employment uniquely helped reduce revocations across the cohort of offenders; they are not redundant with each other. However, only 9 (1%) women had both at least one CORCAN assignment of at least 90 working days and at least one ABE IV course completion. There was almost no overlap, suggesting that that some offenders need employment training, and a different group need education. Both groups are assigned to the appropriate programs and both benefit from these respective services.

Table 3

Employment/Education Factors Associated with Revocations of Conditional Release for Women.

Parameter	χ^2	p	Hazard Ratio	95% Confidence Interval	
Number of ABE IV courses completed	5.22	.022	0.92	0.86	0.99
At least one CORCAN enrollment of 90 working days or more	3.05	.081	0.45	0.18	1.10

Note. Control variables underlying this model included (a) age at release, (b) release type, (c) number of dynamic factor domains with need, (d) number of institutional charges, (e) criminal history risk, and (f) Aboriginal or non-Aboriginal racial background.

Community Services Model

The examination of community services restricted the cohort to the women with at least 50 consecutive days in the community to help ensure that there had been enough time in the community for the women to access the services and for the services to have a benefit. Community maintenance programs and CEC services were examined for 881 (96% of the cohort) women with at least 50 days of follow-up in the community. Too few women (10) participated in community correctional programs to include participation and completion of community programs in the analysis.

The strongest model of community services, displayed in Table 4, included dichotomous indicators of at least one complete community maintenance program and at least one time accessing CEC services. This model was significantly associated with revocations of conditional release (Wald $\chi^2(9, N = 881) = 309.7, p < .001$). Completion of maintenance programs in the community was significantly associated with reductions in the rates of revocations, and CEC services approached significance. Forty-four percent (387) of the women had complete community maintenance programs, and 18% (71) were revoked. Of the 494 (56%) women who did not complete community maintenance programs, 36% (178) were revoked. Although accessing CEC services while in the community only approached significance when added to the community services model, it was highly significant on its own (Wald $\chi^2(1, N = 881) = 16.80, p < .001$). A third (299) of the women accessed CEC services while in the community and 22% (65) of them had revocations. Of the remaining 582 (66%) women who did not access CEC services while on release, 32% (184) had revocations. However, much of these observed

differences can be attributed to the control variables.

When the interaction between CEC services and community maintenance was entered into the model, it was non-significant (Wald $\chi^2(1, N = 881) = 0.08, p = .776$). This suggests that CEC services and complete maintenance programs are equally as effective when offenders accessed both programs (175, 19.9% of the women) as when offenders accessed only one of the programs.

These results must be interpreted with caution because both the completion of community maintenance programs and accessing CEC services in the community violated the proportional hazards assumption. This suggests that the effects of these variables change over follow-up time.

Table 4

Association between Participation in Community Services and Rates of Revocations of Conditional Release

Parameter	χ^2	p	Hazard Ratio	95% Confidence Interval	
Completion of community maintenance programs (yes/no)	42.21	< .001	0.39	0.29	0.51
CEC services in the community (yes/no)	3.21	.073	0.76	0.57	1.03

Note. Control variables underlying this model included (a) age at release, (b) release type, (c) number of dynamic factor domains with need, (d) number of institutional charges, (e) criminal history risk, and (f) Aboriginal or non-Aboriginal racial background.

Overall Additional Services Model

The overall model for federally sentenced women, displayed in Table 5, was a statistically reliable model of revocations of conditional release (Wald $\chi^2(9, N = 918) = 275.9, p < .001$). The hazard ratios show that prison visits and the number of education courses completed were significantly associated with reductions in the rates of revocations of conditional release. Participation in CORCAN and CSC employment programs, vocational certificates, institutional maintenance programs and private family visits were non-significant and omitted from the model. Both the number of education courses completed and prison visits met the proportional hazards assumption.

One third (302) of the women had between one and 28 complete educational courses, and 27% (83) of them had revocations. Similarly, 27% (167) of the women (67%, 616) with no

complete educational courses had revocations. Although women with and without education course completions had similar proportions of revocations, women with more education course completions saw greater benefits than those with only a few. For example of the 61 women with more than 10 complete education courses, only 9 (15%) had revocations.

About 56% (513) of women had between 1 and 279 prison visits, and 21% (109) of them had revocations, while among the 44% (405) of women with no prison visits, 35% (141) had revocations.

The interaction between education course completions and prison visits was non-significant (Wald $\chi^2(1, N = 918) = 0.68, p = .411$). Therefore, the 171 (19%) women who had both visits and complete education courses benefited from both. Those who had visits benefited from them, regardless of the number of education course completions, and those who had education course completions benefited from them regardless of whether they had visits.

Interaction terms were explored to examine whether the effects the additional services may differ depending on the criminal history risk and criminogenic need of the offenders. Since additional services (those interventions other than correctional programs) are often provided without regard to the risk or need levels of offenders, the benefits of the additional services may only be observed for high risk offenders with needs in those areas or for offenders whose levels of risk and need have not been mitigated by participation in correctional programs. The interactions between prison visits and risk and need levels, and between the number of education courses completed and risk and need levels were non-significant.

Table 5

Overall Additional Services Predict Revocations of Conditional Release

Parameter	χ^2	<i>p</i>	Hazard Ratio	95% Confidence Interval	
Number of education courses completed	4.96	.026	0.97	.94	1.00
At least one prison visit	8.50	.004	0.68	0.52	0.88

Note. Control variables underlying this model included (a) age at release, (b) release type, (c) number of dynamic factor domains with need, (d) number of institutional charges, (e) criminal history risk, and (f) Aboriginal or non-Aboriginal racial background.

Discussion

Although most women are exposed to many interventions including specific correctional programs during their sentences, very little research has examined whether these services produce an incremental improvement in their correctional outcomes on release. This study attempts to disentangle the relative contribution of participation in a number of correctional interventions in reducing women offenders' revocations of conditional release.

The procedure for this research controlled for differences between women offenders based on factors related to offending. Beginning with this base control model, correctional interventions from each category were added, first on their own; then all interventions significantly contributing to outcome were added together in the final model. As we found for the men, the results are encouraging with respect to CSC's overall approach to rehabilitation of women offenders. In all the models explored, the combination of services and interventions produced outcomes that significantly improved offenders' chances of remaining in the community while under supervision. Statistically significant interventions were: education course completions, particularly at the ABE IV level, receiving prison visits while incarcerated, and participation in community maintenance programs. Interventions that approached significance included CORCAN employment programs and CEC services in the community. When all interventions are included in the final model together (with the control variables) education course completions and at least one prison visit during incarceration remained significant. These results confirm early research indicating the benefit of education programs for women (Anderson, 1995) and the participation in prison visits while incarcerated (Derkzen et al., 2009). One of the theoretical frameworks that the women offenders' correctional strategy integrates into interventions is relational cultural theory (Miller, Jordan, Stiver, Walker, Surrey et al., 2004) which emphasises the importance of positive relationships in individuals' lives. Some research has illustrated positive outcomes for correctional programs that include relationship theory as one of its foundational approaches (e.g. Messina, Calhoun, & Warda, 2012; Messina, Grella, Cartier, & Torres, 2010). The results of our current study also demonstrated the same benefit noted by Matheson and colleagues (2009) of participation in community maintenance programs after release.

While results for individual interventions were promising, it is also important to note that

within each of the three models – employment and education programs, community services and the overall model – there were two interventions where both showed significant, or approaching significant, results. The criminogenic needs of federally sentenced women are addressed in multiple ways, and many of these various methods of delivering services are associated with reductions in revocations. For example, some women had education course completions, some had CORCAN employment of 90 days or more, and a few had both, and both interventions showed promise in improving women’s rates of success on release. This builds on past research assessing the impact of education and employment programs by showing that both interventions are independently beneficial in improving correctional results. The same is true for involvement in community interventions. In the current research, community maintenance program completions contributed to reductions in revocations and CEC services also showed promising results.

Limitations

Despite the overall encouraging results, because of the complexity of the modeling, the results should be interpreted cautiously. While our findings may well represent an actual causal relationship between the services and outcome, other explanations for the results cannot be ruled out. Given the number of variables explored in the analysis, there is a possibility of Type I error (i.e., the finding of significant results by chance). Related to this is the possibility that the model could be over-fitting. The models presented in the results section were developed by exploring multiple control variables and measures of additional services. This procedure of exploring multiple combinations of measures may have produced final results that inflated the impact of the services. However, the limitation of this study due to over-fitting of the models is mitigated by the large (4-year) admission cohort.

Characteristics of the offenders that we failed to control may also have affected the results, either by reducing the detection of actual positive effects, or by inflating them. A group of offenders who received a service may have differed from those who did not. Although the control model underlying all the results presented in the report was strong and included many different factors, offender characteristics that were not controlled may still have existed and contributed to the results. Related to the offender characteristics is the potential that a third variable is mediating the outcome.

It should also be noted that our study is limited to an analysis of revocations of

conditional release. Within CSC, women's rates of reoffending, at least in the shorter term after release, are low, and, as such, a larger sample with a longer follow-up period would have been necessary in order to generate enough statistical power to study the impact of these interventions on reoffending using this type of modeling.

Conclusion

Despite these methodological concerns, the results suggest that CSC's overall approach to correctional interventions for women is effective. Additional services were found to be associated with reduced revocations of conditional release despite controlling for factors related to offending, and multiple additional services were not redundant with one another; each added incremental improvement to the women's outcomes. Women who participate in a variety of interventions and programs throughout their incarceration and community supervision period benefit from them.

References

- Anderson, S.V. (1995). *Evaluation of the impact of correctional education programs on recidivism*. Columbus OH: Ohio Department of Rehabilitation and Corrections.
- Andrews, D. A., & Bonta, J. (2010). Rehabilitating criminal justice policy and practice. *Psychology, Public Policy, and Law*, 16, 39-55.
- Andrews, D. A., Bonta, J., & Hoge, R. D. (1990). Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior*, 17, 19-52.
- Bales, W. D., & Mears, D. P. (2008). Inmate social ties and the transition to society: Does visitation reduce recidivism? *Journal of Research in Crime and Delinquency*, 45, 287-321.
- Blanchette, K., & Brown, S. L. (2006). *The assessment and treatment of women offenders: An integrative perspective*. West Sussex, U.K.: John Wiley & Sons.
- Blanchette, K., Flight, J., Verbrugge, P., Gobeil, R., & Taylor, K. (2011). *Dialectical Behaviour Therapy within a women's Structured Living Environment*. R-241. Ottawa ON: Correctional Services Canada.
- Bloom, B, Owen, B., & Covington, S. S. (2006). Gender responsive strategies: Theory, policy, guiding principles and practices. In R. Immarigeon (Ed.), *Women and girls in the criminal justice system* (pp. 29-2 – 29-20). Kingston, NJ: Civic Research Institute.
- Booth, L. (2012). *Effective correctional programs for women offenders*. (Research report R-279). Ottawa: Correctional Services Canada.
- Brzozowski, J. A., Taylor-Butts, A. & Johnson, S., 2006. Victimization and offending among the Aboriginal Population in Canada. *Juristat*, 26 (3). Ottawa ON: Statistics Canada.
- Correctional Service of Canada (2011). *Correctional Programs: Education and Employment Programs*. Retrieved from <http://www.csc-scc.gc.ca/text/prgrm/educ-eng.shtml>.
- Correctional Service Canada (2014). Commissioner's Directive 705-6: Correctional Planning and Criminal Profile. Ottawa ON: Correctional Services Canada.
- Corrections and Conditional Release Act*, R.S.C. 1992, c.20
- Day, J. C., Zahn, M. A., & Tichavsky, L. P. (2014). What works and for whom? The effects of gender responsive programming on girls and boys in secure detention. *Journal of Research on Crime and Delinquency*, 52, 93-129.
- Derkzen, D., Gobeil, R., & Gileno, J. (2009). *Visitation and post-release outcome among federally-sentenced offenders*. (Research report R-205). Ottawa ON: Correctional Service

Canada.

- Dowden, C., & Andrews, D. A. (1999). What works for female offenders: A meta-analytic review. *Crime & Delinquency*, 45, 438-452.
- Gendreau, P., Little, T., & Goggin, C. (1996). A meta-analysis of the predictors of adult offender recidivism: What works! *Criminology*, 34, 575-607.
- Gobeil, R., Blanchette, K., & Stewart, L.A. (2016). A meta-analytic review of correctional interventions for women offenders: Gender-neutral versus gender-informed approaches. *Criminal Justice and Behavior*, 1-22. doi: 10.1177/0093854815621100
- Harris, A., Thompson, J., & Derkzen, D. (in approvals). *Assessment of women offender correctional programs (WOCP)*. (Research Report R-374). Ottawa, ON: Correctional Service Canada.
- Kerig, P. K., & Schindler, S. R. (2013). Engendering the evidence base: A critical review of the conceptual and empirical foundations of gender-responsive interventions for girls' delinquency. *Laws*, 2, 244-282.
- Lart, R., Pantazis, C., Pemberton, S., Turner, W., & Almeida, C. (2008). *Interventions aimed at reducing re-offending in female offenders: A rapid evidence assessment (REA)*. Ministry of Justice Series 8/08. London: Ministry of Justice.
- Levitt, L., & Loper, A. B. (2009). The influence of religious participation on the adjustment of female inmates. *American Journal of Orthopsychiatry*, 79(1), 1-7.
- Lovins, L. B., Lowenkamp, C. T., Latessa, E. J., & Smith, P. (2007). Application of the risk principle to female offenders. *Journal of Contemporary Criminal Justice*, 23(4), 383-398.
- Lowenkamp, C. T., Latessa, E. J., & Holsinger, A. M. (2006). The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime & Delinquency*, 52, 77-93.
- Matheson, F. I., Doherty, S., & Grant, B. A. (2009). *Women offender substance abuse programming & community reintegration* (Research Report R-202). Ottawa ON: Correctional Service of Canada.
- Messina, N., Calhoun, S., & Warda, U. (2012). Gender-responsive drug-court treatment: A randomized controlled trial. *Criminal Justice and Behavior*, 39, 1539-1558.
- Messina, N., Grella, C. E., Cartier, J., & Torres, S. (2010). A randomized experimental study of gender-responsive substance abuse treatment for women in prison. *Journal of Substance Abuse Treatment*, 38, 97-107.
- Millson, B., Robinson, D., & Van Dieten, M. (2010). *Women Offender Case Management Model: Outcome evaluation* (NIC Accession Number 018017). Washington, DC: National Institute of Corrections

- Public Safety Canada (2015). *Corrections and conditional release statistical overview: 2014 annual report*. Ottawa, ON: Author
- Rubenfeld, S., Trineer, A., Derkzen, D., & Allenby, K. (2015). *Assessment of the Women's Violence Prevention Program* (Research report R-330). Ottawa ON: Correctional Service of Canada.
- Stewart, L.A., & Gobeil, R. (2015). Correctional interventions for women offenders: A rapid evidence assessment. *Journal of Criminological Research, Policy and Practice*, 1, 116 – 130. doi.org/10.1108/JCRPP-04-2015-0007
- Thompson, J., Forester, T., & Stewart, L. (2015). *Factors related to community supervision outcomes: Revocations*. Research Report R-304. Ottawa, ON: Correctional Service of Canada.
- Usher, A. M., & Stewart, L. A. (2014). Effectiveness of correctional programs with ethnically diverse offenders: A meta-analytic study. *International Journal of Offender Therapy and Comparative Criminology*, 58, 209-230.
- Wilton, G., Nolan, A., Stewart, L.A., & Thompson, J. (in approvals). *The additive effects of participation in multiple correctional interventions and services for federally sentenced men*. Research Report. Ottawa ON: Correctional Service of Canada.

Appendices

Appendix A: Additional Services Variables by Category

CORCAN

CORCAN is a work program that provides offenders with employment and employability skills training. Participation in CORCAN between admission and conditional release was one of the interventions considered in the study. CORCAN jobs are divided among four business lines: textiles, manufacturing, construction, and services. The most common CORCAN jobs for women included: tailor and textile worker, graphic designer and painter. The number of days that an offender was employed in CORCAN and number of CORCAN assignments that an offender received were used to create a variety of measures of participation in CORCAN.

CORCAN employment programs were measured by (a) a dichotomous indicator of any CORCAN enrollment, (b) the number of enrollments in CORCAN, (c) the number of months in the offender's longest CORCAN enrollment, (d) the number of enrollments in CORCAN lasting 90 working days or more, (e) the total number of months across all of the offender's CORCAN enrollments, (f) a dichotomous indicator of at least one CORCAN enrollment lasting 90 working days, and (g) the number of different CORCAN jobs an offender had.

CSC Employment

Offenders may also be employed in jobs involving the operations and maintenance of the institutions. These jobs are categorized as CSC employment. The most common CSC employment jobs for women were: cleaner, groundskeeper, food services worker, inmate committee, and administrative clerk. Like CORCAN, the number of days that an offender was employed in CSC employment programs and the number of CSC employment assignments formed the measures of participation.

CSC employment was measured by (a) a dichotomous indicator of any CSC employment enrollment, (b) the number of CSC employment enrollments, (c) the number of months in the longest CSC employment enrollment, (d) the total number of months in CSC employment across enrollments, (e) a dichotomous indicator of a CSC employment enrollment lasting 90 working days, (f) the number of CSC employment enrollments lasting 90 working days, and (g) the number of different CSC employment jobs.

Education Programs

Participation in education training was another intervention examined, and is required by most offenders. According to CSC policy, Adult Basic Education (ABE) program must be included in offenders' correctional plans when they have less than a high school education or when upgrading the education level is required for participation in correctional interventions or employment programs (CSC, 2014). The majority of offenders in CSC have an education level of grade 10 or less (CSC, 2011).

Other than second language and vocational courses, all education achievements were captured in the data. Courses at the ABE level are more commonly offered within CSC institutions than GED, CEGEP, community college and university levels. Education achievements include completion of full courses and modules, and credits granted for Prior Learning Assessment and Recognition. Education achievement data was categorized as falling into one of eight levels: ABE I, ABE II, ABE III, ABE IV, GED, CEGEP, community college, and university. Although there are slight differences depending on the province, ABE I generally corresponds to grades one to five, ABE II corresponds to grades six to eight, ABE III corresponds to grades nine and 10, and ABE IV corresponds to grades 11 and 12. Each education achievement was counted, but achievements at levels ABE I, II and III were not always associated with credits earned, and GED achievements never had credits earned.

A variety of measures of education program participation were examined. These measures included (a) the total number of education achievements with or without credits earned, (b) a dichotomous indication of at least one education achievement, (c) the total number of achievements with credits earned, (d) a dichotomous indication of at least one education achievement with credits earned, (e) the total number of credits earned across all achievements, (f) the total number of achievements at the ABE I level, (g) the total number of achievements at the ABE II level, (h) the total number of achievements at the ABE III level, (i) the total number of achievements at the ABE IV level, (j) the total number of achievements at the GED level, (k) the total number of achievements at the post secondary level, (l) the number of credits earned per year of incarceration, and (m) the number of achievements per year of incarceration.

Vocational Certificates

Vocational certificates are awarded to offenders who complete supervised training for specific jobs. The most common vocational certificates for women were Workplace Hazardous Material Information System certificates (accounting for 15% of all vocational certificates), first

aid, basic food safety, traffic control person, and computer training. This study examined vocational certificates earned between admission and release. Vocational certificates were measured by (a) a dichotomous indicator of at least one vocational certificate earned, and (b) a count of the number of vocational certificates earned.

Community Employment Centres

Community Employment Centres (CECs) form connections with employers who are willing to hire released offenders. They match offenders' skills with the jobs and finalize the placement. Although less common now, CECs have also offered offenders assistance in job searches, one-on-one employment counselling, case conferences with parole officers, action planning, emails or faxes to potential employers, resume and cover letter writing, and job search workshops. The measures of CEC services included (a) a dichotomous indication of at least one CEC service provided while in the community, and (b) the number of CEC services while in the community.

Visitation

CSC promotes prison visits to maintain and develop relationships between offenders and the community and prepare offenders for reintegration into the community. Prison visits include contact visits conducted in an open area under supervision and non-contact visits which involve glass or another physical barrier between the visitor and offender. Offenders may also be granted the privilege of private family visits (PFVs). These occur in special units within the correctional institution usually consisting of a two-bedroom structure with a kitchen and living room. PFVs may occur once every two months and may last up to 72 hours. Both prison visits and PFVs were examined. The measures included (a) the number of prison visits the offender received, (b) a dichotomous indication of at least one prison visit, (c) the number of PFVs the offender received, and (d) a dichotomous indication of at least one PFV.

Nationally Recognized Correctional Programs in the Community

NRCPs play an important role in reducing the risk of recidivism. Most of the programs are administered while incarcerated, but some are also offered in the community. Whether offenders participated and completed community interventions was examined. Several measures of NRCPs delivered while in the community were examined. These included (a) the number of enrollments in any NRCP while in the community, (b) a dichotomous indication of at least one NRCP enrollment while in the community, (c) the number of enrollments in low, moderate or

high intensity NRCPs while in the community, (d) a dichotomous indication of at least one enrollment in a low, moderate or high intensity NRCP while in the community, (e) the number of enrollments in moderate or high intensity NRCPs while in the community, (f) a dichotomous indication of at least one enrollment in a moderate or high intensity NRCP while in the community, (g) number of complete NRCPs while in the community, and (h) a dichotomous indication of at least one complete NRCP while in the community.

Maintenance Programs

In addition to NRCPs delivered while in the community, both institutional and community maintenance programs were examined. Maintenance programs are interventions that reinforce the content of their associated NRCPs. Maintenance program participation and completion were examined for those delivered while offenders were incarcerated and while in the community. The measures of institutional maintenance programs included (a) the number of enrollments in maintenance programs while incarcerated, (b) a dichotomous indication of at least one enrollment in a maintenance program while incarcerated, (c) the number of complete maintenance programs while incarcerated, (d) a dichotomous indication of at least one complete maintenance program while incarcerated. The same four variables were created for maintenance programs while the offenders were in the community.

Appendix B: Variables considered for inclusion in the control model

Control variables representing criminogenic (dynamic) need, criminal history (static) risk, offender and sentence characteristics, behaviour while incarcerated, and participation in NRCPs were explored in building the control model presented in Table 2. Several variables were examined to reach the set of control variables with the best prediction of revocations of conditional release.

Criminogenic Need

Criminogenic need was controlled by the number of DFIA-R domains with moderate or high need ratings. Other variables from the DFIA-R explored to control for criminogenic need included (a) the overall criminogenic need rating of low, moderate or high, (b) a dichotomous measure of high overall criminogenic need versus low or moderate, (c) a dichotomous indicator suggesting limited prosocial support from marital/family indicators, and (d) dichotomous indicators of moderate or high need for each of the seven need domains.

Criminal History Risk

Criminal history risk was controlled by the overall criminal history risk rating from the SFA. Rated on a scale of low, moderate or high, overall criminal history risk considers the number and type of the offenders' current and previous offences as a youth and as an adult, the severity of offences including the number of victims, use of force and physical harm to the victim, and the number and types of prior sexual offences. Other measures related to criminal history risk that were explored for the control model included (a) a dichotomous measure of high overall criminal history risk versus moderate and low risk, (b) Reintegration Potential of low moderate or high, (c) a dichotomous measure of high versus moderate and low, (d) whether the sentence was the offender's first federal sentence, (e) whether the index offence on the current sentence was for a violent offence, (f) security level assigned as maximum, medium or minimum, (g) a dichotomous security level of maximum or medium versus minimum, (h) a Custody Rating Scale rating of maximum, medium or minimum, and (i) a Custody Rating Scale rating of maximum or medium versus minimum.

Offender and Sentence Characteristics

Offender and sentence characteristics were controlled by age at release, release type (parole or statutory release), and Aboriginal self-identity. Other variables explored to control for offender and sentence characteristics included (a) aggregate sentence length, (b) a measure of

marital status in which married and common law, divorced and widower, and never married formed three groups of offenders, (c) a motivation level of low, moderate or high, (d) a dichotomous indication of low or medium versus high motivation, (e) an accountability level of low, moderate or high, (f) a yes on the responsivity flag, and (g) a yes on the engagement flag.

Behaviour while Incarcerated

A measure of the number of institutional charges with a guilty verdict resulting from disciplinary offences controlled for behaviour while incarcerated. A dichotomous indicator of at least one institutional charges was also explored for inclusion in the control model. The number of admissions to administrative segregation between offenders' admission date and release, a dichotomous indication of at least one admission to segregation, and the total number of months spent in segregation were also explored to control offenders' behaviour while incarcerated.

Institutional charges and admissions to segregation are indications of offenders' adjustment to incarceration and are associated with successful reintegration into the community. The most common disciplinary offences among the federally sentenced women in the present cohort included disobeying rules (54%), possessing an unauthorized item (8%), disrespecting staff (8%), fighting or assaulting others (8%), disrespect to provoke violence (5%), and disobeying orders (4%). All alleged incidents of misconduct are reviewed by a correctional manager or institutional head who will then formally lay a charge, and a disciplinary hearing will be held. Additional variables explored to measure institutional charges included the number of institutional charges incurred between admission and release, and a dichotomous measure indicating at least one institutional charge.

Administrative segregation may be voluntary when the offender requests administrative segregation due to concerns for his own safety, or it may be involuntary when the offender's actions or intentions jeopardize the security of the penitentiary or the safety of any person, allowing the offender to associate with other offenders may interfere with a criminal investigation, or the offender's safety is in jeopardy. In both cases there must be no reasonable alternative to administrative segregation.

Participation in NRCPs

Participation in NRCPs was not controlled in any of the models presented in the Results section because none of the measures contributed to the prediction of revocations of conditional release when other factors were controlled. However, several variables were explored for

inclusion in the control model, most of which were significantly associated with reductions in revocations of conditional release when other variables were not controlled. Measures of participation in NRCPs included six-, four- and three-group participation profiles depending on the number of complete and incomplete low, moderate and high (or just moderate and high) NRCPs offenders had between admission and release. For example, one such variable grouped offenders with no enrollments in moderate or high intensity NRCPs, offenders who completed all their enrollments in moderate or high intensity NRCPs, and offenders who had at least one incomplete NRCP. Other variables explored included counts of (a) the number of enrollments in correctional programs, (b) a dichotomous indicator of at least one NRCP enrollment, (c) the number of enrollments in low, moderate and high intensity programs, (d) a dichotomous indicator of at least one enrollment in a low, moderate and high intensity program, (e) the number of enrollments in NRCPs while incarcerated, (f) a dichotomous indicator of at least one NRCP enrollment while incarcerated, (g) the number of enrollments in low, moderate and high intensity programs while incarcerated, (h) a dichotomous indicator of at least one enrollment in a low, moderate and high intensity program while incarcerated, (i) the number of completed NRCPs, (j) a dichotomous indicator of at least one complete NRCP, (k) the number of complete NRCPs while incarcerated, (l) a dichotomous indicator of at least one complete NRCP while incarcerated, (m) the number of complete NRCPs of low, moderate or high intensity, (n) a dichotomous indicator of at least one complete NRCP of low, moderate or high intensity, (o) the number of completed low, moderate and high intensity programs while incarcerated, and (p) a dichotomous indicator of at least one complete low, moderate and high intensity program while incarcerated.