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RESEARCH REPORT

A Quantitative Examination of Factors Available in the Offender Management System Associated with Successful Release

2019 N° R-429

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**A Quantitative Examination of Factors Available in the Offender Management System
Associated with Successful Release**

Kaitlyn Wardrop

Chelsea Sheahan

&

Lynn A. Stewart

Correctional Service of Canada

September 2019

Acknowledgements

The authors would like to acknowledge the contributions of the Women Offender Sector, the Correctional Operations and Programs Sector, and the Aboriginal Initiatives Directorate for their feedback on study methodology and draft report. Many thanks to Kate Pardoel for assisting in identifying relevant empirical literature and providing feedback on the draft report. Finally, thank you to Geoff Wilton and Leslie Anne Keown for being available to answer data and methodology related questions.

Executive Summary

Key words: *positive factors, success on release, protective factors*

The identification of factors related to successful release is currently an important focus of correctional research. Although attention to criminal risk factors remains vital in the promotion of safe reintegration of offenders, the inclusion of a consideration of offender strengths provides a more comprehensive approach to case management, correctional planning and intervention. Further, the identification and consideration of these factors promotes hope for individuals coping with significant disadvantages as they move towards desistance from crime.

The current study aimed to identify factors related to success on release that were available from the existing Correctional Service of Canada (CSC) administrative data. For the purpose of this study, success was defined as having had no suspensions or revocations for at least six months post-release.

All federal offenders admitted and released between April 1, 2012 and March 31, 2017 who experienced at least six months of follow-up time in the community, and who were rated as medium or high risk and need at the time of release were included in this study. The final cohort included 17,213 men (24% Indigenous) and 932 women (39% Indigenous). When possible, analyses were disaggregated by Indigenous status.

Results suggest that some offender assessments, for example the assessment of reintegration potential and the measure of accountability were associated with success in the community for at least six months for men, but fewer ratings assessed at intake were significantly associated with success for women. Social support defined as receiving institutional visits while incarcerated was predictive of success on release for both men and women. Involvement in Indigenous services was related to success in the community, particularly for Indigenous men.

There is an ongoing debate as to whether the absence of risk indicators provides relevant information regarding offenders' strengths. In our study, the absence of risk factors assessed through the Dynamic Factor Identification and Analysis – Revised (DFIA-R) measure was predictive of success for men, but fewer indicators were predictive for women.

This research suggests that there may be other relevant factors to assess and target that would supplement traditional risk assessments. Although the current study identified many factors that are important to post-release success, we relied on intake assessments for most of these data. Information pertaining to offenders' experience and state of mind just prior to release or while on community supervision was limited. While information about offender risk is critical to correctional goals, increasingly research has shown that the measurement and promotion of offenders' strengths and protective factors is relevant to both risk prediction and case management and should be considered in future developments of risk assessment and case planning.

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Introduction

While assessing and addressing well established criminal risk factors remains a keystone to promoting safe reintegration, recently there has been increased attention paid to identifying positive factors associated with successful release and longer term desistance from crime, even among higher risk offenders. It has been noted that an approach that places an emphasis on identifying and shoring up factors that promote success provides a more affirmative basis for correctional planning and interventions than one focused solely on risk reduction and risk management (Polaschek, 2017) and provides more hope for individuals coping with significant disadvantages.

The variable vocabulary used to describe protective factors can be a source of confusion in the field. The literature refers to desistance factors, strengths, positive factors, promotive factors, and resilience factors, while others have noted that protective factors are often simply conceived of as the absence of the given risk factor (Ward, 2017). Polaschek (2017), however, observed that we can apply a clear empirical definition of the term; a protective factor is a characteristic of an individual or a feature of his or her environment associated with a decrease in involvement in crime or violence (see also de Vries Robbe, de Vogel, & Douglas, 2014; Lösel & Farrington, 2012). Typically, a protective factor is described in the context of an individual being at risk for a negative outcome (Laub & Sampson, 2005). Among at-risk youth, for example, protective factors are defined as those variables that are hypothesized to inhibit or insulate youths from the risk factors associated with involvement in antisocial or self-destructive behaviours (Turner, Hartman, Exum, & Cullen, 2007).

Protective factors have been found to interact with risk level and appear to be particularly effective in attenuating recidivism among higher risk cases (Jones, Brown, Robinson, & Frey, 2015). Generally, research points to a dose–response relationship, with outcomes improving based on the accumulation of protective factors (Lösel & Farrington, 2012; Smith et al., 1995; Turner et al., 2007). One piece of research found that high risk individuals exposed to at least eight protective factors were four times more likely to be resilient than those exposed to less than five protective factors (Smith, Lizotte, Thornberry, & Krohn, 1995). In his early work, Rutter (1985) noted that it is likely that factors interact with one another, thus amplifying their individual effects.

Dynamic factors that can be fostered by case supervisors or by the individuals themselves to promote desistance can be classified as either external or internal to the individual (for detailed reviews of desistance literature please see Serin, Chadwick, & Lloyd, 2016; Ward, 2016). Examples of external dynamic factors include prosocial social networks of support such as prosocial relationships with family, spouse, children, and friends, participation or membership in religious, cultural, spiritual, or heritage-based groups and establishments, and support from criminal justice staff (e.g., parole officer, program officer, psychologists). Involvement in structured activities such as education, vocational training, employment, prosocial leisure, or development programs can also be classified as external dynamic factors, and characteristics such as ability to maintain stable accommodation, adequate finances, and demonstrate skills for independent living are illustrative of positive community functioning. There are also a number of internal dynamic factors that can be acquired or improved. Examples include: 1) positive attitudes toward leading a prosocial life (for example, a change in identity from ‘hell raiser’ to family man; Laub & Sampson, 2003), 2) having a collaborative attitude towards individuals working in the criminal justice system, and 3) motivation to make changes that can improve the chances of success on release. Factors such as motivation can be quite complex, and include many interrelated internal characteristics like willingness to participate in treatment if necessary, a sense of self efficacy, responsiveness to advice from positive influences, rule adherence, realistic expectations regarding reintegration, an understanding of the cost/benefits of choices and actions, strong coping skills in the face of adversity, ability to set longer term goals and plan for success, and evidence of impulse control or self-management. Notably, Maruna (2001) emphasized that men from his sample who had sustained a period of time without involvement in crime described a conscious decision to give up crime and a change in their identity. These men viewed their futures as an opportunity to apply what they had learned and “give back” to their communities and families, thereby giving purpose and meaning to their lives.

It appears that similar protective factors, like most risk factors, apply across offending patterns and offender characteristics. Among Canadian federal offenders with a mental health problem, for example, a previous study found that those with more prosocial support from family, friends, and intimate partners, those involved in structured activities, and those who were rated as motivated to stay in the community were more likely to remain in the community for at least a year without any returns to custody (Stewart, Brine, Wilton, Power, & Hnain, 2015).

An area that is under-researched is gender-specific differences in protective factors. Some of the above listed factors may be gender-salient, that is, more important to women or to men (Matheson, 2015). A number of studies, for example, have highlighted that involvement in a steady romantic relationship is more protective for men than for women offenders (Cobbina, Huebner, Berg, 2010; Wyse, Harding, & Morenoff, 2014) possibly because of men's generally higher rates of participation in criminal and antisocial behaviours, while supportive relationships outside of intimate relationships as well as adopting the role of a primary care giver for children may have stronger positive effects on women (Gobeil, 2008; Rodermond, Kruttschnitt, Slotboom, & Bijleveld, 2016; Wyse et al., 2014).

Research has suggested that some influences such as substance misuse, history of trauma, and the historical and social context created as a result of colonialism are salient risk factors contributing to criminal behaviour among Indigenous people. With respect to factors that protect from criminal involvement, there is some limited research in this area but what there is indicates that Indigenous individuals benefit from culturally specific protective factors in addition to the general protective factors (Gideon, 2013; Harris & McFarland, 2000; Pridemore, 2004, Richards, 2015). In Gideon's (2013) interviews with 36 Indigenous offenders in Northern Ontario the interviewees noted that Aboriginal spirituality and cultural activities were a major factor in their desistance process or recovery from substance misuse. In particular, they noted that contact with Elders, participation in Indigenous ceremonies within institutions, and developing personal values and an identity (often a native/cultural self-identity) had been important to them. Gideon (2013) advised, however, that not all of the Indigenous interviewed were culturally connected or were predisposed to adopt culture-specific options. The more urbanized Indigenous offenders interviewed emphasized that developing a prosocial identity through employability skills was important to them.

Important to this work is how these factors, once identified, can be used in case management and in treatment to assist offenders as they move towards desistance from crime. For example, McNeil, Farrall, Lightowler, and Maruna (2012) have developed advice for probation and parole officers based on the desistance literature. First, they emphasize that case managers need to acknowledge that people who have been involved in persistent offending are unlikely to give up this lifestyle overnight. Lapses and relapses are common; therefore supervision should focus on helping offenders to find ways to manage setbacks and difficulties

constructively (Weaver & McNeill, 2007). They also point out that the process of desistance is individualized and that social work and supervision should accommodate and capitalize on issues of identity and diversity (Weaver & McNeill, 2010). The development and maintenance of themes of hope and optimism for a prosocial future should be critical to supervision sessions. While they acknowledge that a consideration of the offenders' risk and needs is important, they also believe that it is appropriate to focus on their strengths and the resources, both personal strengths and resources, as well as the strengths and resources they have access to through their social networks. To promote desistance, interveners should encourage self-efficacy and agency; interventions are most likely to be effective where they encourage and respect self-determination. In their words, "this means working with offenders not on them" (McCulloch, 2005; McNeill, 2006), which includes encouraging them to apply their skills and also to practice their prosocial roles and newly forming identities (such as 'worker', 'citizen' or 'father') (Farrall, 2002; 2004; McNeill & Whyte, 2007).

The Current Study

The goal of the current study is to examine factors available in existing CSC databases that the literature points to as being empirically related to success on release for moderate or high risk offenders. Success in this study is defined as having had no suspensions or revocations for a post release period of at least six months. The purpose of the study is to identify specific factors that could be promoted by case management and could potentially be used to inform future revisions to existing risk assessment tools. The following questions were examined:

1. What information does CSC's offender management system (OMS) capture that has been identified by scholarly literature as factors that can measure offenders' strengths?
2. Of those factors available through OMS, is this information associated with offender success in the community?

This study will be supplemented by a further qualitative study of offenders who have been successful on release. It will be based on interviews in which offenders provided information as to what they attributed their success.

Method

Participants

This study included all federal offenders admitted and released between April 1, 2012 and March 31, 2017 who experienced at least six months of follow-up time in the community, and who were rated as at least medium risk and need at the time of release.¹ This resulted in a final cohort of 17,213 men (23.5% Indigenous) and 932 women (39.3% Indigenous). Where possible, analyses included an examination by four groups: Indigenous men, non-Indigenous men, Indigenous women, and non-Indigenous women. Due to low numbers of Indigenous women, analyses were often combined for Indigenous and non-Indigenous women.

Although the profiles of the four offender groups varied (see Table A1 in Appendix A), most offenders across groups were in their mid-30s at the time of release, were serving a sentence for a schedule I or homicide offence, and had a non-discretionary release. For the purposes of this study, success in the community was defined as having at least six months in the community where the offender did not experience any suspension (issued, executed) or revocation to federal custody. Non-Indigenous men and women were more likely to be successful in the community (72.5% and 75.4%, respectively) compared to Indigenous men and women (55.2% and 57.9%, respectively).

Procedure and Data Sources

Given the goal of the present study was to explore factors associated with community success, a review of existing literature and content analysis of existing assessment tools with strength-based components was undertaken (e.g., ProQuest databases, grey literature, etc.). The purpose of this review was to identify factors hypothesized to be important in the crime desistance process. Based on the results of this review, information collected within the OMS was examined to identify potential protective variables. Once OMS variables were identified, descriptive statistics (i.e., percentages) and logistic regression analyses were used to explore their relationship with success in the community. Logistic regression produces an estimate of the odds of an event occurring. In this study, the event was whether the offender remains suspension- and revocation-free in the community for at least six months. When examining the relationship

¹ Offenders rated as low risk or need at release were excluded from analyses as the focus of this study was to assess factors that may assist higher risk offenders reintegrating into the community.

between marital status and remaining suspension- and revocation-free in the community for six months, an odds ratio of 1.0 would indicate no difference in the odds of community success regardless of marital status. An odds ratio greater than 1.0 would indicate an increased likelihood of community success among offenders with a significant other compared to those without a significant other, and an odds ratio less than 1.0 would suggest decreased odds of success.

Offender Intake Assessment

A wide variety of data sources were used to conceptualize protective factors. Many of the variables considered in this study originated from information collected as part of the Offender Intake Assessment (OIA), an assessment process that has a long history within CSC (Brown & Motiuk, 2005; Mathias & Wormith, 2017; Motiuk, 1997; 1998; Stewart et al., 2017). Conducted upon admission to federal custody, the OIA collects details of the criminal history (e.g., offence, sentencing) and other important socio-demographic information (e.g., dynamic needs) to inform the development of the offenders' correctional plan (Commissioner's Directive (CD) 705).

One component of the OIA is the Dynamic Factors Identification and Analysis-Revised (DFIA-R) tool, which evaluates an offender's level of dynamic need in seven domains: employment/education, marital/family, associates, substance abuse, community functioning, personal/emotional orientation, and attitudes. These domains are assessed through the completion of 100 dichotomous indicators rated as "present" or "absent." Recent research has confirmed the association of the measure with offender outcomes (Stewart et. al., 2017). For the purposes of the current study, the relationship between the absence of DFIA-R indicators and success in the community was compared to the presence of indicators, recognizing that the absence of risk may not equate to offender strength.²

Assessments of offender accountability, motivation, responsivity, engagement, and reintegration potential were also considered. These appraisals contribute to the development of the offender's correctional plan which inform the approach taken to target identified criminogenic needs and develop the skills necessary for successful re-entry into society (CSC, 2015). In instances where ratings are reassessed throughout the period of incarceration (e.g., reintegration level and motivation level), the most proximal rating to release was considered.

² For example, the non-endorsement of the Marital/Family domain indicator "Relations with parental figure were negative during childhood" does not necessarily suggest that the offender experienced a positive and nurturing childhood.

Ratings of offender accountability assess the degree to which the offender accepts responsibility for their actions and displays empathy towards the victim(s) of their crime. Parole officers use their professional judgement to rate offender accountability as being low, medium or high. Ratings of offender motivation assess whether the offender is self-motivated and is actively addressing problem areas. Parole officers use their professional judgement to rate offender motivation as being low, medium, or high. Offender engagement is determined by combining ratings on motivation, accountability, and responsivity. In order to be engaged there must be a rating of either medium or high in both accountability and motivation. Research has confirmed that among offenders in CSC this Accountability, Motivation and Engagement (AME) assessment conducted at intake was related to offender outcomes (Mathias & Wormith, 2017). Responsivity factors are characteristics that need to be considered since they could influence the offender's capacity to benefit from targeted interventions (e.g., difficulties in literacy, language comprehension). This is rated by parole officers as either being present or absent. Finally, offenders are assessed as having either low, moderate, or high reintegration potential. This is determined by combining ratings on a variety of static and dynamic risk assessment instruments, the specific instruments varying by gender and Indigenous status (for more information on the offender intake assessment process see CD-705-6).

Institutional Variables

Offender experiences while incarcerated were considered in this study, including the occurrence of institutional visits from family and friends, educational achievements, and being employed during incarceration.

Community-Based Variables

The available information while the offender was supervised in the community was limited; however, the presence of community employment and, for those on full parole and statutory release, a residency condition was considered in relation to success in the community.

Indigenous-Culture Variables

For Indigenous men and women, variables were assessed to determine whether involvement in Indigenous services was related to success in the community, including having a healing plan, involvement in Pathways, residing in healing lodges, and Section 84 releases.

Results

The results are presented in five parts. The first section examines the association between offender assessment results and community success. The second section focuses on the role social support plays in community success. The third and fourth sections examine the relationship of education and employment initiatives as well as having a residency condition on offenders' community success. Lastly, the fifth section assesses the impact of Indigenous services and initiatives on offender success in the community. Detailed tabular information can be found in Appendix A.

Offender Assessments

Several offender assessments were significantly associated with success in the community for men; fewer were significantly associated with success for women. As shown in Table A2, higher reintegration level at release (medium and high reintegration levels compared to low) was associated with success in the community for at least six months. Specifically, non-Indigenous men were 9.12 times more likely to be successful in the community when their reintegration level was high, and Indigenous men were 7.15 times more likely to be successful when their reintegration level was high. Women were 3.2 times more likely to be successful with high reintegration levels at release compared to low reintegration.

High motivation levels at release also were associated with success upon release for men (odds ratios of 3.93 and 4.06 for non-Indigenous and Indigenous men, respectively). Similarly, men were approximately two times more likely to be successful in the community when their accountability level at admission was high (odds ratio of 2.09 and 1.88 for non-Indigenous and Indigenous men, respectively). Higher accountability levels at admission were not associated with success for women. Not having a responsibility flag at admission was generally significantly associated with success in the community, although this did not reach statistical significance for Indigenous women. Offender engagement was significantly associated with success in the community for non-Indigenous and Indigenous men, but not significantly associated with success for women offenders.

As can be seen in Table A3, the absence of risk factors identified by the DFIA-R was generally associated with success, especially for men offenders. The absence of DFIA-R items

that had the strongest associations with community success were similar for non-Indigenous and Indigenous men. For both groups, the absence of endorsement of association with substance abusers, the absence of endorsement for the item related to an unstable job history, and the absence of impulsivity were the three strongest predictors of success in the community (See Table 1). Furthermore, the absence of indicators in the Associates domain were strongly predictive of success for Indigenous and Non-Indigenous men. The non-endorsement of ‘has gone on drug taking bouts or binges’ in the Substance Use domain was predictive of success for non-Indigenous men.

When sufficient sample sizes allowed, we examined gender differences on the association of the absence of DFIA-R indicators with success on release (Table 1). Generally, the absence of risk indicators in the Attitude and Employment/Education domains were the most predictive of success for both Non-Indigenous and Indigenous women. The absence of risk indicators within the Substance Use domain were predictive for Non-Indigenous women, whereas the absence of specific indicators in the Associates and Education domains were predictive for Indigenous women.³

³ These results should not be construed to suggest that substance use issues are not relevant for Indigenous women. In fact, Indigenous women have very high rates of substance use needs (Stewart et al., 2018) and it is this low variability in Substance Abuse domain indicator endorsement that may account for the non-significant results.

Table 1

DFIA-R Indicators with the Strongest Associations with Success in the Community

	OR [95% CI]
Non-Indigenous Men	
Associates with substance abusers	3.74 [1.79, 5.73]
Unstable job history	3.11 [2.81, 3.44]
Impulsivity	2.99 [2.70, 3.32]
Limited prosocial support from friends	2.99 [2.69, 3.33]
Has gone on drug taking bouts or binges	2.94 [2.70, 3.20]
Indigenous Men	
Associates with substance abusers	3.12 [2.37, 4.09]
Unstable job history	2.62 [2.20, 3.11]
Impulsivity	2.65 [2.20, 3.19]
Has many criminal acquaintances	2.45 [2.07, 2.89]
Has many criminal friends	2.35 [2.05, 2.71]
Non-Indigenous Women	
Associates with substance abusers	3.34 [1.72, 6.48]
Has gone on drug taking bouts or binges	2.95 [1.78, 4.90]
Takes pride in criminal exploits	2.95 [1.56, 5.58]
Regular drug use is part of offenders lifestyle	2.74 [1.62, 4.63]
Employment history is absent	2.69 [1.74, 4.16]
Indigenous Women	
Has less than grade 10 education or equivalent	3.84 [2.30, 6.43]
Has many criminal friends	3.40 [2.02, 5.73]
Has suspected affiliation with street gang/organized crime	2.78 [1.54, 5.05]
Work ethic can be described as poor	2.68 [1.64, 4.36]
Attitudes support instrumental/goal oriented violence	2.64 [1.64, 4.25]

Note. The positive association is between the absence of the indicator and its association with success in the community.

OR = Odds Ratio; 95% CI = 95% confidence intervals

Social Support

As presented in Table A4, men who reported that they had a significant other (intimate partner) at admission were approximately 1.3 times more likely to be successful in the community for at least six months (odds ratios of 1.35 and 1.29 for non-Indigenous and Indigenous men, respectively). Having a partner at admission was not significantly associated with success in the community for either non-Indigenous or Indigenous women.

Encouraging results were found for institutional visits for both men and women, such that having at least one institutional visit of any kind, at least one private family visit, and at least one regular visit, increased the likelihood for success in the community for non-Indigenous men, Indigenous men, and women overall. Similarly, having at least one visit from an immediate family member, an extended family member, friends, or partner or ex-partner increased the likelihood of success in the community for at least six months (See Table A5 for odds ratios).

Education and Employment

As shown in Table A6 in Appendix A, improvements in education level while incarcerated were not significantly associated with remaining suspension- and revocation-free for at least six months in the community. However, having at least a high school diploma (as measured by the DFIA-R Employment/Education domain indicator) was protective. Encouraging results were found for involvement in both institutional- and community-based employment for all groups examined. For example, offenders who completed at least one CSC or CORCAN employment assignment of 90 work days or more during a continuous period were approximately 1.3 times more likely to succeed in the community than those who did not. The strength of this association was even stronger when individuals were employed in the community, particularly for Indigenous men and women (odds ratios of 4.73 and 4.68, respectively).

Residency Condition

Initial analyses restricting the sample to offenders on full parole or statutory release. Examining the association between having a residency condition and experiencing success in the community we found that individuals with a residency condition were significantly less likely to

remain suspension- and revocation-free for at least six months (see Table A7 in Appendix A for detailed results). To explore this finding further, separate analyses were run for offenders assessed as medium and high static risk at release to determine whether this relationship was mediated by offender risk level. As shown in Table A8 in Appendix A, the negative association between the presence of a residency condition and success in the community was weakened when disaggregated by offender static risk rating. Further, for the medium and high static risk women and for medium static risk Indigenous men, the association became non-significant. These results suggest then that the initial finding that individuals with residency conditions were less likely to succeed in the community may be partially explained by the underlying characteristics of offenders who have this release condition imposed. Further, the increased monitoring by correctional staff associated with residing in a halfway house or community correctional centre could increase the likelihood of offenders receiving suspensions.

Ties to Indigenous Culture

We found promising results with respect to the relationship between involvement in Indigenous interventions and services and community success (see Table A9 in Appendix A for detailed results). For Indigenous men, participation in Indigenous-related opportunities was consistently related to being suspension- and revocation-free for a period of at least six months. For example, Indigenous men who developed a healing plan or spent time in a healing lodge were 1.28 and 2.05 times more likely, respectively, to succeed in the community than those who did not. Results were less clear for Indigenous women, although were generally still positive for most aspects. While Indigenous women who developed a healing plan were significantly less likely to succeed in the community (odds ratio = 0.63), participation in other Indigenous specific interventions was generally positively related to community success, although the relationship did not reach a level of statistical significance. For example, 66.7% of Indigenous women who were released from a healing lodge remained suspension- and revocation-free for at least six months, whereas only 55.6% of Indigenous women released from a mainstream institution did so. The tempered results for Indigenous women may be related to the impact of small sample size on statistical power or the profile of women involved in each of the interventions.

Discussion

The purpose of the present research was two-fold: (1) to explore what data were available within CSC's administrative databases to assess factors the correctional literature determined to be positive or protective, and (2) to assess whether identified variables were in fact empirically related to at least short term success on conditional release for federally sentenced offenders.

Identification of Positive Factors within Administrative Data

An examination of the variables available in OMS found that some protective factors identified in the scholarly literature are routinely collected as administrative data. These include ratings of offender reintegration potential and motivation, education level, as well as employment status while on conditional release. However, information pertaining to offenders' experience and state of mind just prior to release or while on community supervision was more limited and provides avenues where additional data collection may be beneficial. This reflects the emphasis placed on risk-based factors in the management of the correctional population. However, broadening the search within OMS yielded additional sources that provided information on relevant protective factors. For example, receiving institutional visits from friends and family suggests the offender has a level of social support, at least during incarceration, but it is unknown as to whether this support was maintained after release. Further, the absence of individual DFIA-R risk indicators pointed to relevant information that could be regarded as measures of offenders' strengths, however, this information is collected at admission to federal custody and reflects historical experience that may not be relevant to their experiences on conditional release. Further, it more accurately measures the *absence* of risk, rather than the *presence* of a strength. This interpretation of the DFIA-R results can vary across indicators. For an offender for whom the Employment/Education domain indicator "Has less than high school diploma or equivalent," is not endorsed we may assume that the offender would have at least a high school diploma – a stable positive factor. However, an offender for whom the Marital/Family domain indicator "Has many criminal friends" is not endorsed may not necessarily be receiving the benefit of having a prosocial support system (e.g., they could have no friends, criminal or otherwise).

There are a number of constructs hypothesized in scholarly literature to be important offender strengths that we were unable to examine in the current study since the information is

not collected within OMS or is not collected in a manner that is easily extracted or operationalized for research purposes. This includes how offenders feel about leaving a criminal lifestyle, their transition towards a prosocial identity, the quality of their release plan, and the level of social support while on release. This is not to say that offender strengths are not considered within the correctional process. For example, correctional staff complete a community strategy assessment to assess offenders' release plans and propose a supervision strategy that will manage offender risk. Some of their primary considerations are the community/social supports available to the offender and a suitable accommodation plan (CD 712-1) and their prospects for employment. To have included this information in the current study, however, would have required extensive case file coding. This reinforces the importance of the supplementary ongoing research that is being conducted by Nipissing University, in which interviews with successful offenders in the community will shed light on what factors they believed were important in assisting them on release (see Brown et al., 2019). Expanded routine data collection within administrative databases could better facilitate the consideration of these factors for research purposes.

Relationship with Community Success

Many of the factors found to be associated with successful release outcomes are consistent with previous research. Across all groups, being self-motivated, being employed while on conditional release, and maintaining social bonds while incarcerated were all important in the community reintegration process. Notably, having a significant other was protective for Indigenous and non-Indigenous men, while this was not the case for women. This aligns with previous research showing that a steady intimate relationship has a greater positive impact for men, than for women, offenders (Cobbina et al., 2010; Wyse et al., 2014).

Involvement in Indigenous services and initiatives was significantly related to remaining suspension- and revocation-free in the community for at least six months for men, but this did not reach statistical significance for women although, generally, the trends were in the right direction. This reinforces other research that has indicated that there may be culturally-relevant factors associated with success for Indigenous offenders (Gideon, 2013; Nez Perce et al., 2000; Pridemore, 2004, Richards, 2015). While it was difficult to directly measure the degree to which Indigenous offenders felt connected to their Indigenous spirituality and culture, using proxy variables, like involvement in cultural activities, suggests that an affiliation

with the culture assisted in initial success. Ongoing research using qualitative interviews with offenders themselves to assess factors associated with successful release (Brown et al., 2019) will shed more light on potential culturally relevant protective variables for Indigenous offenders.

A particularly striking finding was the importance of community employment in community success. Across gender and Indigenous status, being employed while on conditional release was shown to increase the odds of community success by between approximately three and five times that of those who were unemployed on conditional release. These results reinforce other research that has highlighted the importance of structured activities, including employment, in improving offender community outcomes (Laub & Sampson, 2001; Stewart et al., 2015). However, disentangling whether the association with initial success on release is due to characteristics of offenders who are able to obtain and maintain employment or whether it is due to the impact of employment itself, is difficult.

Limitations

As with any research study, there are drawbacks that should be acknowledged. First, we relied on administrative data and, for some factors, only variables that approximated the information we sought were available. Many of the variables we identified were suggestive, but were better described as factors that measured the absence of risk rather than explicitly pointed to the presence of a strength. This is the disadvantage of relying on convenience data. For example, social support was assumed if the offenders received institutional visits. Certain groups (e.g., Inuit offenders) may be less likely to receive institutional visits due to geographic separation from their support network. This may not mean that they do not have a social support system or that they do not receive other types of social support while incarcerated or on conditional release (e.g., letters, telephone calls). Given the promising results of this exploratory study, an evaluation that actually measures well established strength factors at intake and also prior to release would provide much richer, and probably more reliable, data. Further, while remaining in the community for at least six months without experiencing any suspensions or revocations is encouraging, this does not ensure that there will be prolonged behavioural change. Further research could examine whether these the same protective factors are associated with positive outcomes with longer follow-up periods.

Practical Implications

Despite these limitations, the pattern of results arising from the current study has a number of practical implications for CSC. First and foremost, this research highlights the current emphasis placed on recording risk-based information, rather than examining protective factors. While information about offender risk is critical to the mandate of CSC, increasingly, research has shown that the measurement of offender strengths is relevant to risk prediction and case management (Jones et al., 2015; Polaschek, 2017). Given the relevance of protective factors operationalized in the current research, a more purposeful method of recording of additional protective factors within administrative data would facilitate future research. A more comprehensive consideration of offender strengths may further benefit case management practice and risk prediction.

Relatedly, the results of this research point to areas that may be relevant to assess in a more formal capacity to supplement risk assessment results. There are many assessment instruments used outside of CSC that incorporate the assessment of protective factors (e.g., the START; Webster, Martin, Brink, Nicholls, & Middleton, 2004; SPIN; Orbis Partners, 2003). These assessment tools differ on whether they assess protective factors as being the reverse of risk or independent from risk, but represent a shift towards a more integrated approach of supporting offender reintegration. Further, this research points to the need for more theoretical and empirical development regarding what constructs are truly protective as opposed to simply the converse of risk. This ongoing discourse could be supported by assessing offender strengths in a more formal capacity.

Finally, this research points to areas that could be targeted to improve offender outcomes. Efforts to increase offender motivation, provide education and employment skills upgrading, encourage the development and maintenance of prosocial social bonds, assist offenders in finding gainful employment when released into the community, and in addition for women, promote healthy relationship skills are all supported in the current research and in the broader correctional literature.

Conclusions

Overall, the current research study indicates many protective factors can be obtained from administrative data and these are related to short term success in the community after release. Given these promising results, this research points to the need to further assess offender

strengths, perhaps through a formal assessment tool, and reinforces the necessity of focused services and initiatives that promote these factors.

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Appendix A: Supplementary Results

Table A1

Profile of offenders by gender and Indigenous identity

	Non-Indigenous Men (N = 13,161)	Indigenous Men (N = 4,052)	Non-Indigenous Women (N = 566)	Indigenous Women (N = 366)
	%	%	%	%
Demographic				
Age at release in years (mean and standard deviation)	38.6 (12.3)	34.7 (10.5)	36.7 (10.9)	33.7 (9.4)
Has partner	42.3	37.6	28.6	29.5
Has at least high school ^a	70.5	81.3	64.8	78.0
Sentence				
Aggregate sentence				
Indeterminate	1.3	1.3	1.6	1.9
Three years or less	46.6	50.6	64.1	63.7
More than three years	52.2	48.2	34.3	34.4
Offence type				
Schedule I or homicide	56.8	67.0	51.4	71.6
Other offence	43.2	33.4	48.6	28.4
Risk assessment				
Static risk at release				
Medium	51.1	42.0	72.3	58.7
High	48.9	58.0	27.7	41.3
Dynamic need at release				
Medium	48.9	42.3	52.8	46.7
High	51.1	57.7	47.2	53.3
Release				
Type of release				
Discretionary release	37.7	25.1	54.1	44.8
Non-discretionary release	62.3	75.0	45.9	55.2
Successful in the community for at least six months	72.5	55.2	75.4	57.9

Note. Numbers may not sum to 100 due to rounding.

^a Percentages are based on cases with available information. In no instances did missing data account for more than 15% of the total.

Table A2

Association between offender assessments and success in the community using logistic regression with a six-month fixed follow-up period

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		All Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Reintegration level at release										
Low	50.3	-	38.2	-	64.5	--	46.4	--	56.8	-
Medium	76.8	3.27***	62.6	2.71***	76.2	--	59.6	--	69.5	1.74**
High	90.2	9.12***	81.5	7.15***	85.1	--	70.0	--	80.8	3.20***
Motivation level at release										
Low	57.8	-	38.6	-	69.2	--	30.7	--	56.4	--
Medium	71.1	1.80***	52.3	1.74***	71.8	--	38.2	--	63.3	--
High	84.3	3.93***	71.9	4.06***	79.2	--	66.5	--	74.1	--
Accountability level at admission										
Low	68.7	-	53.0	-	79.0	--	54.6	--	72.2	-
Medium	72.5	1.20***	54.5	1.06 ^{ns}	75.5	--	56.5	--	67.5	0.80 ^{ns}
High	82.1	2.09***	67.9	1.88***	74.1	--	62.5	--	69.9	0.89 ^{ns}
Responsivity rating at admission										
Has a responsivity concern	66.4	-	49.4	-	68.5	-	54.1	-	62.8	-
Does not have a responsivity concern	73.7	1.41***	57.5	1.40***	79.4	1.77**	60.1	1.28 ^{ns}	71.8	1.51**
Offender engagement at admission										
Not engaged	67.3	-	51.7	-	74.6	--	53.3	--	67.7	-
Engaged	74.5	1.40***	56.3	1.20*	75.6	--	58.3	--	68.7	1.04 ^{ns}

^{ns} non-significant, * p < .05, ** p < .01, *** p < .001

Table A3

Association between DFIA-R indicators and success in the community using logistic regression with a six-month fixed-follow-up period

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Employment and Education Domain										
Has less than grade 10 or equivalent										
Present (1)	68.0	-	50.8	-	69.4	-	47.1	-	58.9	-
Absent (0)	74.1	1.35***	59.7	1.43***	77.1	1.49 ^{ns}	77.4	3.84***	77.2	2.36***
Has less than high school diploma or equivalent										
Present (1)	68.6	-	52.3	-	69.7	-	52.6	--	62.1	-
Absent (0)	76.3	1.47***	63.4	1.58***	80.6	1.81***	78.9	--	80.1	2.46***
Employment history is absent										
Present	55.4	-	39.5	-	58.4	-	46.2	-	52.1	-
Absent	73.7	2.26***	58.8	2.19***	79.1	2.69***	65.8	2.24***	74.4	2.66***
Unemployed at the time of arrest										
Present	64.5	-	49.8	-	69.5	--	55.4	--	63.5	-
Absent	81.5	2.43***	65.6	1.92***	85.7	--	72.0	--	81.5	2.53***
Job history has been unstable										
Present	64.3	-	49.8	-	71.1	-	55.1	--	64.1	-
Absent	84.9	3.11***	72.2	2.62***	82.0	1.85*	76.9	--	80.7	2.34***
Marketable job skills obtained through experience limited										
Present	61.3	-	45.6	-	71.0	-	54.8	-	63.7	-
Absent	78.2	2.27***	66.4	2.37***	78.3	1.48 ^{ns}	69.6	1.88*	75.7	1.78***

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Job skills obtained through formal training limited										
Present	67.1	-	50.7	--	71.1	-	55.8	--	64.8	-
Absent	80.7	2.04***	70.8	--	83.5	2.06*	72.7	--	79.8	2.16***
Dissatisfied with job skills										
Present	64.0	-	48.4	-	72.0	-	53.5	-	64.0	-
Absent	75.8	1.77***	59.0	1.54***	76.4	1.26 ^{ns}	66.1	1.70*	72.8	1.51**
Co-operative work skills are limited										
Present	58.4	-	42.8	-	77.6	-	51.7	-	58.7	-
Absent	75.0	2.14***	59.6	1.97***	64.7	1.89**	61.1	1.46 ^{ns}	71.3	1.75***
Belief in oneself to improve employability is low										
Present	63.3	-	46.7	-	75.6	-	55.7	-	67.4	-
Absent	72.6	1.54***	56.3	1.47***	72.7	0.86 ^{ns}	58.6	1.12 ^{ns}	67.0	0.99 ^{ns}
Work ethic can be described as poor										
Present	57.6	-	42.2	-	68.6	-	68.3	-	57.0	-
Absent	76.8	2.43***	62.9	2.33***	76.6	1.50 ^{ns}	44.6	2.68***	73.7	2.11***
Has previously been referred to programs addressing deficit(s)										
Present	60.1	-	45.1	-	67.2	-	53.9	-	62.0	-
Absent	73.9	1.88***	57.3	1.63***	75.1	1.47 ^{ns}	60.0	1.29 ^{ns}	68.9	1.36 ^{ns}

Table A3 *Continued*

	Non-Indigenous Men (<i>N</i> = 13,161)		Indigenous Men (<i>N</i> = 4,052)		Non-Indigenous Women (<i>N</i> = 566)		Indigenous Women (<i>N</i> = 366)		Women (<i>N</i> = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Marital/Family Domain										
Limited attachment to family unit during childhood										
Present (1)	62.1	-	47.1	-	70.6	-	53.7	-	71.9	-
Absent (0)	74.2	1.75***	59.7	1.66***	75.9	1.31 ^{ns}	64.3	1.55 ^{ns}	62.8	1.51**
Relations with parental figure were negative during childhood										
Present (1)	64.8	-	50.4	-	70.3	-	57.1	-	73.0	-
Absent (0)	75.4	1.67***	60.5	1.51***	78.6	1.55*	61.2	1.18 ^{ns}	64.3	1.50*
Abused during childhood										
Present	65.3	-	51.6	-	70.3	-	55.4	-	63.2	-
Absent	74.1	1.52***	57.9	1.29***	77.2	1.43 ^{ns}	67.1	1.64 ^{ns}	74.2	1.68**
Witnessed family violence during childhood										
Present	65.3	-	51.5	-	71.7	-	56.3	-	71.4	-
Absent	73.7	1.49***	58.6	1.34***	74.1	1.13 ^{ns}	63.9	1.37 ^{ns}	63.4	1.44*
Family members criminally active during childhood										
Present	59.9	-	43.7	-	65.7	-	55.6	-	59.9	-
Absent	74.0	1.91***	60.9	2.01***	76.0	1.66*	65.9	1.54 ^{ns}	73.2	1.82***

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Inability to maintain an enduring intimate relationship										
Present	62.2	-	49.7	-	66.3	-	54.7	-	61.3	-
Absent	74.4	1.76***	56.9	1.33***	77.6	1.76**	60.4	1.26 ^{ns}	71.0	1.55**
Intimate relationship(s) have been problematic										
Present	68.8	-	54.3	-	72.6	--	57.0	--	65.8	--
Absent	74.1	1.30***	54.6	1.01 ^{ns}	81.4	--	80.0	--	81.1	--
Victimized by spousal abuse										
Present	65.9	-	53.0	-	74.0	-	57.0	-	66.5	-
Absent	71.9	1.32***	54.8	1.08 ^{ns}	74.5	1.03 ^{ns}	63.1	1.29 ^{ns}	71.0	1.23 ^{ns}
Perpetrated spousal violence										
Present	66.5	-	52.9	-	69.5	-	52.4	-	60.0	-
Absent	73.5	1.40***	55.7	1.12 ^{ns}	75.2	1.33 ^{ns}	64.1	1.62*	71.5	1.68**
Attitudes support spousal violence										
Present	65.8	-	49.8	-	61.8	--	57.9	-	59.3	-
Absent	72.3	1.36***	55.5	1.26**	74.9	--	58.9	1.04 ^{ns}	68.8	1.51 ^{ns}
Has no parental responsibilities										
Present	67.7	-	51.6	-	67.1	-	53.2	-	61.1	-
Absent	73.9	1.35***	56.4	1.21**	78.7	1.81**	63.7	1.54 ^{ns}	73.0	1.72***
Has significant difficulties handling parental responsibilities										
Present	68.5	-	51.1	-	69.7	-	59.0	-	64.8	-
Absent	72.4	1.20***	56.6	1.25**	75.3	1.33 ^{ns}	59.7	1.03 ^{ns}	70.0	1.27 ^{ns}

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Parental knowledge and/or skills is limited										
Present	66.4	-	48.6	-	72.6	-	52.2	-	63.0	-
Absent	72.9	1.36***	57.4	1.42***	74.7	1.12 ^{ns}	61.0	1.43 ^{ns}	69.7	1.35 ^{ns}
Formally investigated for suspicion of child abuse/neglect										
Present	80.4	-	58.4	-	79.0	-	69.2	-	74.7	-
Absent	70.7	-0.53***	54.2	0.84 ^{ns}	70.4	0.63 ^{ns}	53.4	0.51**	64.0	0.60**
Uses excessive force to discipline child										
Present	83.7	-	66.7	-	90.0	--	100.0	--	94.6	--
Absent	71.3	-0.73***	54.6	0.60 ^{ns}	72.4	--	57.1	--	66.4	--
Has previously been referred to programs addressing deficit(s)										
Present	65.8	-	51.4	-	70.3	-	55.3	-	62.3	-
Absent	71.6	1.31***	54.9	1.15 ^{ns}	74.4	1.23 ^{ns}	61.0	1.27 ^{ns}	69.4	1.37 ^{ns}
Associates Domain										
Associates with substance abusers										
Present	65.2	-	52.2	-	69.9	-	55.5	--	63.5	--
Absent	87.5	3.74***	77.3	3.12***	88.5	3.34***	88.9	--	88.6	--
Has many criminal acquaintances										
Present	65.6	-	49.7	-	69.5	--	51.9	--	62.0	-
Absent	84.7	2.91***	70.7	2.45***	87.3	--	86.8	--	87.1	4.14***

Table A3 *Continued*

	Non-Indigenous Men (<i>N</i> = 13,161)		Indigenous Men (<i>N</i> = 4,052)		Non-Indigenous Women (<i>N</i> = 566)		Indigenous Women (<i>N</i> = 366)		Women (<i>N</i> = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Has many criminal friends										
Present	63.3	-	46.5	-	67.9	-	49.1	-	59.2	-
Absent	79.7	2.27***	67.1	2.35***	80.2	1.92**	76.6	3.40***	79.0	2.60
Has contact with criminal family members										
Present	63.5	-	47.2	-	67.0	-	50.7	-	58.0	-
Absent	73.0	1.56***	59.2	1.63***	74.9	1.48 ^{ns}	67.7	2.04**	72.6	1.92***
Has a criminal partner										
Present	66.8	-	47.7	-	71.8	-	50.0	-	62.6	-
Absent	72.1	1.29***	55.7	1.38***	74.6	1.15 ^{ns}	68.3	2.16***	72.3	1.56**
Suspected affiliation with street gang/organized crime										
Present	69.7	-	43.3	-	87.9	--	37.5	-	56.2	-
Absent	71.5	1.09 ^{ns}	57.1	1.75***	72.0	--	62.6	2.78***	68.4	1.69*
Resides in a high crime area										
Present	59.7	-	47.1	-	65.2	-	54.6	-	59.4	-
Absent	75.1	2.04***	61.5	1.80***	79.0	2.01**	66.0	1.62 ^{ns}	75.4	2.10***
Prosocial support from an intimate partner is limited										
Present	65.6	-	50.2	-	70.8	-	55.1	--	64.2	-
Absent	78.0	1.86***	62.0	1.62***	80.8	1.74*	70.7	--	77.5	1.92***
Prosocial family support is limited										
Present	61.2	-	46.4	-	69.7	-	51.7	-	61.2	-
Absent	75.5	1.96***	61.1	1.82***	77.1	1.46 ^{ns}	66.0	1.82**	73.2	1.74***

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Prosocial support from friends is limited										
Present	65.1	-	50.6	-	72.7	-	56.3	--	65.7	-
Absent	84.8	2.99***	68.4	2.12***	76.5	1.22 ^{ns}	71.7	--	75.0	1.57*
Has previously been referred to programs addressing deficit(s)										
Present	56.9	-	48.0	-	67.2	--	47.2	-	57.7	-
Absent	72.9	2.04***	55.5	1.35**	74.8	--	61.0	1.75 ^{ns}	69.4	1.66 ^{ns}
Substance Abuse Domain										
Early age alcohol use										
Present	63.9	-	51.9	-	71.0	-	55.2	--	62.7	-
Absent	77.7	1.97***	64.4	1.68***	75.6	1.26 ^{ns}	75.0	--	75.4	1.83***
Frequently engages in binge drinking										
Present	66.0	-	50.9	-	71.6	-	53.2	-	61.0	-
Absent	73.8	1.45***	59.8	1.43***	73.9	1.12 ^{ns}	66.9	1.78*	72.0	1.65***
Has combined the use of alcohol and drugs										
Present	64.0	-	51.0	-	70.3	-	53.6	--	62.0	-
Absent	78.6	2.07***	65.7	1.84***	77.1	1.42 ^{ns}	76.9	--	77.1	2.06***
Alcohol use interferes with employment										
Present	61.1	-	48.3	-	64.9	-	50.9	-	56.4	-
Absent	74.0	1.81***	59.3	1.56***	76.1	1.72*	66.5	1.91**	73.2	2.11***

Table A3 *Continued*

	Non-Indigenous Men (<i>N</i> = 13,161)		Indigenous Men (<i>N</i> = 4,052)		Non-Indigenous Women (<i>N</i> = 566)		Indigenous Women (<i>N</i> = 366)		Women (<i>N</i> = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Alcohol use interferes with interpersonal relationships										
Present	66.4	-	52.0	-	67.7	-	54.3	-	60.3	-
Absent	73.8	1.43***	58.6	1.31***	76.3	1.54*	65.0	1.56 ^{ns}	73.2	1.80***
Alcohol use interferes with physical or emotional well-being										
Present	66.2	-	52.0	-	69.2	-	54.8	-	61.1	-
Absent	73.7	1.43***	57.6	1.25***	75.6	1.37 ^{ns}	65.1	1.54 ^{ns}	72.9	1.71***
Excessive alcohol use is part of the offenders lifestyle										
Present	65.2	-	51.3	-	71.0	-	54.5	-	61.2	-
Absent	74.2	1.53***	59.9	1.42***	74.5	1.19 ^{ns}	65.0	1.55 ^{ns}	72.0	1.63**
Early age drug use										
Present	61.4	-	49.9	-	67.6	-	52.5	--	60.5	-
Absent	81.4	2.74***	69.5	2.29***	82.9	2.33***	80.6	--	82.3	3.04***
Has gone on drug taking bouts or binges										
Present	60.2	-	49.2	-	67.4	-	51.4	--	60.5	-
Absent	81.6	2.94***	62.6	1.73***	85.9	2.95***	77.2	--	83.0	3.18***
Has combined the use of different drugs										
Present	61.0	-	49.5	-	69.1	-	53.5	-	62.6	-
Absent	81.2	2.75***	61.2	1.61***	83.1	2.20**	72.0	2.23**	79.0	2.25***
Drug use interferes with employment										
Present	58.7	-	47.2	-	68.0	-	52.9	-	61.5	-
Absent	79.3	2.69***	60.8	1.73***	82.8	2.26***	71.3	2.21**	78.6	2.29***

Table A3 *Continued*

	Non-Indigenous Men (<i>N</i> = 13,161)		Indigenous Men (<i>N</i> = 4,052)		Non-Indigenous Women (<i>N</i> = 566)		Indigenous Women (<i>N</i> = 366)		Women (<i>N</i> = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Drug use interferes with interpersonal relationships										
Present	60.8	-	49.8	-	68.0	--	53.7	--	61.9	-
Absent	80.7	2.70***	60.1	1.52***	88.0	--	76.1	--	83.8	3.19***
Drug use interferes with physical or emotional well-being										
Present	61.4	-	50.0	-	68.5	--	54.1	--	62.3	-
Absent	80.2	2.55***	60.1	1.51***	88.3	--	78.7	--	85.2	3.48***
Regular drug use is part of the offenders lifestyle										
Present	62.1	-	49.8	-	68.5	-	53.9	--	62.2	-
Absent	82.3	2.84***	64.2	1.81***	85.6	2.74***	76.1	--	82.5	2.87***
Alcohol/drug use has resulted in law violations										
Present	65.3	-	52.3	-	68.9	--	55.8	--	63.0	--
Absent	84.0	2.78***	72.2	2.37***	88.1	--	91.3	--	88.6	--
Becomes violent when drinking or using drugs										
Present	61.0	-	50.6	-	67.0	-	51.3	--	58.2	-
Absent	78.0	2.27***	62.9	1.65***	77.7	1.71*	77.1	--	77.6	2.48***
Alcohol and/or drug use is part of offence cycle										
Present	64.3	-	51.8	-	70.1	-	55.4	--	63.4	-
Absent	82.3	2.58***	69.2	2.09***	82.9	2.08**	82.4	--	82.8	2.78***

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Has previously been referred to programs addressing deficits										
Present	61.6	-	50.1	-	67.3	-	55.7	-	62.4	-
Absent	78.4	2.26***	60.3	1.51***	82.3	2.27***	63.3	1.37 ^{ns}	75.2	1.83***
Community Functioning Domain										
Unstable accommodation										
Present	55.7	-	44.3	-	67.1	-	51.0	-	60.0	-
Absent	78.5	2.90***	62.3	2.08***	81.0	2.10***	69.4	2.18**	76.9	2.21***
Financial instability										
Present	64.1	-	50.0	-	70.5	-	54.8	--	63.8	-
Absent	82.6	2.66***	65.8	1.93***	82.6	1.99*	73.1	--	79.6	2.22***
Has used social assistance										
Present	64.9	-	52.7	-	70.7	-	57.3	--	64.9	-
Absent	79.3	2.07***	59.1	1.30***	86.2	2.59**	61.5	--	80.5	2.24**
Constructive leisure activities are limited										
Present	62.3	-	48.4	-	71.4	-	55.5	-	64.7	-
Absent	80.6	2.51***	63.5	1.85***	77.9	1.41 ^{ns}	64.0	1.42 ^{ns}	72.8	1.46*
Community attachment is limited										
Present	61.4	-	46.6	-	72.2	-	51.7	-	64.0	-
Absent	77.9	2.22***	62.8	1.93***	75.6	1.20 ^{ns}	69.3	2.11**	73.1	1.52**
Use of community resources is limited										
Present	62.7	-	47.9	-	72.7	-	58.7	-	67.2	-
Absent	75.7	1.85***	60.5	1.67***	74.1	1.08 ^{ns}	57.9	0.97 ^{ns}	67.4	1.01 ^{ns}

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Has previously been referred to programs addressing deficits										
Present	55.2	-	45.5	-	59.3	-	53.6	-	56.5	-
Absent	72.6	2.15***	55.7	1.50***	75.8	2.15**	59.4	1.27 ^{ns}	69.4	1.75**
Personal/Emotional Domain										
Displays narrow and rigid thinking										
Present	65.8	-	48.8	-	71.3	-	52.4	-	62.1	-
Absent	75.6	1.61***	61.0	1.64***	74.6	1.18 ^{ns}	65.0	1.69*	71.2	1.51**
Problem recognition skills are limited										
Present	69.5	-	51.7	-	72.4	-	58.7	-	66.5	-
Absent	74.1	1.25***	61.0	1.46***	74.8	1.13 ^{ns}	57.3	0.94 ^{ns}	68.3	1.09 ^{ns}
Ability to generate choices is limited										
Present	67.9	-	52.1	-	74.6	-	56.1	--	66.8	-
Absent	77.4	1.62***	63.6	1.61***	69.0	0.76 ^{ns}	70.6	--	69.5	1.13 ^{ns}
Ability to link actions to consequences is limited										
Present	69.8	-	53.4	-	72.7	-	58.1	-	66.3	-
Absent	73.7	1.21***	57.1	1.16*	74.6	1.10 ^{ns}	57.5	0.98 ^{ns}	68.9	1.13 ^{ns}
Has difficulty coping with stress										
Present	66.5	-	52.0	-	71.4	--	57.0	--	65.4	-
Absent	77.9	1.78***	61.0	1.44***	80.5	--	66.7	--	76.4	1.71*

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Gives up easily when challenged										
Present	60.2	-	47.1	-	70.1	-	54.4	-	62.5	-
Absent	76.0	2.10***	59.3	1.64***	74.9	1.28 ^{ns}	64.0	1.49 ^{ns}	70.8	1.46*
Impulsive										
Present	65.2	-	50.4	-	68.7	--	54.7	--	62.7	-
Absent	84.8	2.99***	72.9	2.65***	87.6	--	75.9	--	84.0	3.12***
Engages in thrill seeking behaviour										
Present	63.4	-	47.3	-	62.6	-	52.6	-	58.4	-
Absent	75.7	1.80***	59.5	1.64***	80.3	2.44***	62.8	1.52 ^{ns}	73.5	1.98***
Gambling has been problematic										
Present	70.4	-	46.3	-	75.7	--	50.00	--	65.1	-
Absent	71.4	1.05 ^{ns}	55.0	1.42*	73.6	--	58.9	--	67.7	1.13 ^{ns}
Has difficulty setting long-term goals										
Present	60.5	-	46.7	-	69.7	-	55.3	-	63.2	-
Absent	78.8	2.42***	63.1	1.95***	75.9	1.37 ^{ns}	62.1	1.33 ^{ns}	71.0	1.43*
Has difficulty setting realistic goals										
Present	59.9	-	44.7	-	71.1	-	57.5	-	64.3	-
Absent	76.5	2.18***	61.2	1.96***	74.5	1.19 ^{ns}	59.0	1.07 ^{ns}	69.2	1.25 ^{ns}
Time management skills are problematic										
Present	59.7	-	46.3	-	73.5	-	54.1	-	64.0	-
Absent	76.4	2.19***	60.4	1.77***	73.9	1.02 ^{ns}	61.4	1.35 ^{ns}	69.3	1.27 ^{ns}

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Assertiveness skills are limited										
Present	69.9	-	53.6	-	75.3	-	54.9	-	65.9	-
Absent	71.9	1.10*	54.8	1.05 ^{ns}	72.4	0.86 ^{ns}	62.5	1.37 ^{ns}	69.0	1.15 ^{ns}
Listening skills are limited										
Present	64.3	-	48.0	-	71.0	-	53.4	-	62.4	-
Absent	73.3	1.52***	56.9	1.43***	74.3	1.18 ^{ns}	60.8	1.35 ^{ns}	69.1	1.35 ^{ns}
Has difficulty solving interpersonal problems										
Present	67.0	-	51.2	-	74.0	-	55.5	-	66.1	-
Absent	77.9	1.74***	63.9	1.69***	71.4	0.88 ^{ns}	66.7	1.60 ^{ns}	69.8	1.19 ^{ns}
Manipulates others to achieve goals										
Present	68.2	-	49.3	-	71.4	-	52.5	-	64.1	-
Absent	74.1	1.34***	57.3	1.38***	74.6	1.18 ^{ns}	64.1	1.62*	70.2	1.31 ^{ns}
Empathy skills are limited										
Present	74.8	-	49.9	-	73.7	-	52.5	-	64.2	-
Absent	68.6	1.36***	60.5	1.54***	73.3	0.98 ^{ns}	62.0	1.47 ^{ns}	69.0	1.24 ^{ns}
Frequently feels intense anger										
Present	60.4	-	44.5	-	62.7	-	51.2	-	56.7	-
Absent	74.3	1.90***	59.4	1.82***	76.2	1.90**	61.2	1.50 ^{ns}	70.8	1.85***
Frequently suppresses anger										
Present	65.5	-	47.4	-	69.4	-	54.6	-	62.2	-
Absent	73.0	1.43***	57.6	1.51***	75.1	1.33 ^{ns}	63.7	1.46 ^{ns}	71.2	1.50**

Table A3 *Continued*

	Non-Indigenous Men (<i>N</i> = 13,161)		Indigenous Men (<i>N</i> = 4,052)		Non-Indigenous Women (<i>N</i> = 566)		Indigenous Women (<i>N</i> = 366)		Women (<i>N</i> = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Frequently acts in an aggressive manner										
Present	59.9	-	46.3	-	61.5	-	48.2	-	54.3	-
Absent	76.5	2.18***	62.0	1.89***	76.8	2.07**	65.4	2.03**	72.9	2.27***
Has low frustration tolerance										
Present	61.4	-	47.4	-	68.2	-	51.9	-	60.4	-
Absent	77.6	2.18***	61.0	1.74***	76.2	1.50 ^{ns}	66.7	1.85**	73.0	1.77***
Frequently interprets neutral situations as hostile										
Present	59.2	-	43.7	-	61.9	-	62.3	-	62.1	-
Absent	74.5	2.01***	58.5	1.82***	76.5	2.00**	59.7	0.90 ^{ns}	70.0	1.43*
Has deviant sexual preferences										
Present	86.8	-	66.2	-	84.6	--	100.0	--	87.5	--
Absent	68.8	.34***	52.6	.57***	73.3	--	58.0	--	67.0	--
Displays deviant sexual attitudes										
Present	84.8	-	67.1	-	88.2	--	100.0	--	90.9	--
Absent	68.8	.40***	52.3	.54***	72.6	--	57.7	--	66.5	--
Has previously been referred to programs addressing deficit(s)										
Present	62.0	-	47.0	-	63.5	-	58.6	-	61.3	-
Absent	74.1	1.75***	57.8	1.55***	77.8	2.02**	58.5	1.00 ^{ns}	70.2	1.48*

Table A3 *Continued*

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Attitudes Domain										
Displays negative attitudes towards the criminal justice system										
Present	65.5	-	49.1	-	71.3	-	52.3	-	63.3	-
Absent	78.9	1.97***	63.5	1.81***	74.0	1.15 ^{ns}	61.3	1.45 ^{ns}	69.1	1.29 ^{ns}
Displays negative attitudes towards the correctional system										
Present	57.1	-	42.6	-	61.3	-	52.6	-	56.9	-
Absent	77.0	2.52***	60.4	2.05***	75.3	1.92*	60.0	1.35 ^{ns}	69.5	1.73**
Takes pride in criminal exploits										
Present	59.0	-	40.6	-	51.2	-	54.3	--	52.6	-
Absent	73.4	1.93***	57.1	1.95***	75.6	2.95***	59.6	--	69.3	2.04**
Displays non-conforming attitudes towards society										
Present	66.9	-	50.8	-	69.1	-	50.6	-	61.3	-
Absent	81.5	2.17***	63.4	1.67***	77.5	1.54*	67.1	2.00**	73.5	1.75***
Values a substance abusing lifestyle										
Present	64.0	-	50.3	-	67.1	-	51.8	-	59.3	-
Absent	79.5	2.18***	64.4	1.79***	76.3	1.58*	65.2	1.74*	72.7	1.83***
Disrespects personal belongings										
Present	59.9	-	44.1	-	66.4	-	51.8	-	60.7	-
Absent	80.8	2.81***	64.6	2.31***	76.3	1.63*	61.1	1.47 ^{ns}	70.3	1.53*

Table A3 *Continued*

	Non-Indigenous Men (<i>N</i> = 13,161)		Indigenous Men (<i>N</i> = 4,052)		Non-Indigenous Women (<i>N</i> = 566)		Indigenous Women (<i>N</i> = 366)		Women (<i>N</i> = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Disrespects public or commercial property										
Present	58.4	-	43.6	-	66.2	-	48.9	-	59.8	-
Absent	79.3	2.73***	61.7	2.09***	77.0	1.71*	62.1	1.71*	70.9	1.64**
Attitudes support instrumental/goal- oriented violence										
Present	63.8	-	47.7	-	62.0	-	42.6	-	52.8	-
Absent	77.1	1.90***	61.9	1.79***	76.8	2.03**	66.2	2.64***	72.9	2.40***
Attitudes support expressive/emotional violence										
Present	64.1	-	48.8	-	65.3	-	53.4	-	58.9	-
Absent	75.4	1.72***	60.3	1.60***	75.5	1.64*	63.0	1.49 ^{ns}	71.4	1.74***
Denies crime or uses excuses to justify or minimize crime										
Present	71.3	-	54.7	-	80.3	-	58.3	-	71.0	-
Absent	71.1	0.99 ^{ns}	54.1	0.98 ^{ns}	67.2	0.50**	57.6	0.97 ^{ns}	63.6	0.71*
Has previously been referred to programs addressing deficit(s)										
Present	59.1	-	47.4	-	67.7	-	51.7	-	60.0	-
Absent	74.1	1.97***	56.4	1.44***	74.5	1.39 ^{ns}	60.3	1.42 ^{ns}	69.0	1.48 ^{ns}

^{ns} non-significant, * *p* < .05, ** *p* < .01, *** *p* < .001

Table A4

Association between marital status at admission and success in the community using logistic regression with a six-month fixed follow-up period

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		All Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Does not have a significant other	70.0	-	52.8	-	74.5	-	60.9	-	69.2	-
Does have a significant other	75.9	1.35***	59.1	1.29***	77.8	1.20 ^{ns}	50.9	0.67 ^{ns}	67.0	0.91 ^{ns}

^{ns} non-significant, * p < .05, ** p < .01, *** p < .001

Table A5

Association between institutional visits and success in the community using logistic regression with a six-month fixed follow-up period

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		All Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
No institutional visits	63.9	-	49.6	-	68.6	-	54.4	-	61.8	-
At least one institutional visit	77.9	1.99***	62.6	1.70***	79.8	1.80**	62.4	1.39 ^{ns}	74.2	1.78***
No private family visits	69.7	-	53.2	-	73.9	--	55.9	--	66.8	-
At least one private family visit	84.8	2.43***	72.5	2.62***	86.8	--	73.8	--	81.8	2.24**
No regular visit	64.2	-	49.7	-	69.1	-	54.6	-	62.1	-
At least one regular visit	77.8	1.96***	62.5	1.69***	79.6	1.75**	62.3	1.37 ^{ns}	74.1	1.75***
No visits from immediate family	67.1	-	51.4	-	70.4	-	54.5	-	63.1	-
At least one visit from immediate family	79.1	1.86***	65.1	2.03***	81.3	1.83**	66.1	1.63*	76.8	1.94***
No visits from extended family	69.6	-	53.0	-	73.8	-	56.5	--	66.7	-
At least one visit from extended family	82.0	1.98***	67.9	1.88***	81.7	1.58 ^{ns}	66.1	--	76.7	1.65*
No visits from friends	69.7	-	53.6	-	72.3	-	56.1	-	65.5	-
At least one visit from friends	83.0	2.11***	67.5	1.80***	84.4	2.06**	67.2	1.61 ^{ns}	79.3	2.02***
No visits from partner or ex-partner	68.3	-	52.3	-	73.8	--	55.7	--	66.3	-
At least one visit from partner or ex-partner	81.6	2.05***	65.7	1.75***	83.7	--	83.3	--	83.6	2.59***
No visits from others	77.4	-	62.7	-	79.7	-	65.9	-	75.4	-
At least one visit from others ^a	65.8	0.56***	50.2	0.60***	70.5	0.61*	53.1	0.58*	62.4	0.54***

^{ns} non-significant, * p < .05, ** p < .01, *** p < .001^a "Other" visits include business-related, clergy, community support group, elder, employee, employer, lawyer, landlord, guardian, agent, representative, other, and no known relationship.

Table A6

Association between educational and employment involvement and success in the community using logistic regression with a six-month fixed follow-up period

	Non-Indigenous Men (N = 13,161)		Indigenous Men (N = 4,052)		Non-Indigenous Women (N = 566)		Indigenous Women (N = 366)		All Women (N = 932)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Education										
No ABE level	72.2	-	55.9	-	72.6	-	59.4	-	68.5	-
At least one ABE level	72.9	1.04 ^{ns}	54.6	0.95 ^{ns}	79.0	1.42 ^{ns}	57.0	0.90 ^{ns}	68.6	1.01 ^{ns}
No GED or CEGEP	72.4	-	54.9	-	76.7	--	58.0	--	69.2	-
Any GED or CEGEP	74.6	1.12 ^{ns}	65.2	1.54*	62.0	--	57.1	--	60.6	0.68 ^{ns}
Employment										
No institutional employment	68.9	-	50.5	-	72.4	-	54.5	-	65.2	-
Any institutional employment ^a	74.2	1.30***	57.4	1.32***	77.9	1.34 ^{ns}	60.8	1.30 ^{ns}	71.3	1.32*
No community employment ^b	53.4	-	39.4	-	65.9	-	46.1	-	56.9	-
Any community employment ^c	83.3	4.35***	75.4	4.73***	84.9	2.91***	80.0	4.68***	83.3	3.79***

^{ns} non-significant, * p < .05, ** p < .01, *** p < .001

^a Institutional employment was defined as at least one CSC or CORCAN assignment of 90 working days or more during a continuous period. ^b Analyses exclude offenders who are unemployed and not available to work (e.g., retired, educational/vocational upgrading, disability, cognitive or mental health issues, etc.).

^c Analyses are based on cases with available information. In no instances did missing data account for more than 17% of the total.

Table A7

Association between having a residency condition and success in the community for offenders released on supervision types other than day parole using logistic regression with a six-month fixed follow-up period

	Non-Indigenous Men (N = 8,400)		Indigenous Men (N = 3,063)		Non-Indigenous Women (N = 271)		Indigenous Women (N = 202)		All Women (N = 473)	
	%	OR	%	OR	%	OR	%	OR	%	OR
No residency condition	68.9	-	51.3	-	73.5	-	47.1	-	62.3	-
Residency condition	57.4	0.61***	43.5	0.73***	57.0	0.45**	42.4	0.83 ^{ns}	50.7	0.62*

Note. Analysis is based on offenders released on to full parole or statutory release (as all those on day parole would have a residency requirement built into their release).

^{ns} non-significant, * p < .05, ** p < .01, *** p < .001

Table A8

Association between having a residency condition and success in the community for offenders released on supervision types other than day parole by static risk rating at release using logistic regression with a six-month fixed follow-up period

	Non-Indigenous Men (N = 8,400)		Indigenous Men (N = 3,063)		Non-Indigenous Women (N = 271)		Indigenous Women (N = 202)		All Women (N = 473)	
	%	OR	%	OR	%	OR	%	OR	%	OR
Medium Risk										
No residency condition	72.4	-	53.3	-	75.7	--	52.6	--	67.4	-
Residency condition	64.7	0.70***	49.8	0.87 ^{ns}	63.2	--	45.8	--	56.5	0.63 ^{ns}
High Risk										
No residency condition	65.1	-	49.5	-	66.7	--	39.7	--	51.5	-
Residency condition	55.4	0.67***	42.1	0.74**	52.1	--	46.5	--	46.7	0.83 ^{ns}

Note. Analysis is based on offenders released on to full parole or statutory release (as all those on day parole would have a residency requirement built into their release). ^{ns} non-significant, * p < .05, ** p < .01, *** p < .001

Table A9

Association between Indigenous services involvement and success in the community for Indigenous offenders using logistic regression with a six-month fixed follow-up period

	Indigenous Men (N = 4,052)		Indigenous Women (N = 366)	
	%	OR	%	OR
No healing plan	53.2	-	63.8	-
Healing plan	59.3	1.28***	52.6	0.63*
Pathways				
Not admitted into a Pathways unit before release	52.5	-	56.3	-
Admitted into a Pathways unit before release	60.4	1.38***	62.1	1.28 ^{ns}
Healing lodge involvement				
Did not spend time in a healing lodge	69.4	-	58.9	-
Spent time in a healing lodge	52.7	2.05***	57.7	1.05 ^{ns}
Not released from a healing lodge	52.7	-	55.6	-
Released from a healing lodge	73.5	2.49***	66.7	1.60 ^{ns}
Section 84 release				
No Section 84 release	51.9	-	55.5	-
Section 84 release	66.2	1.81***	61.6	1.29 ^{ns}

* p < .05, ** p < .01, *** p < .001