

The relationship between program participation, institutional misconduct and recidivism among federally sentenced adult male offenders¹

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The reality of the prison research literature is that very little is known about the changes in inmates' experiences and activities in prison over time and the relationship between these changes and recidivism (Bonta & Gendreau, 1990; DeLisi, 2003). Remarkably few studies in the last 40 years have measured behavioural change, and then only for very brief periods and on small samples (Bennett, 1974; Bolton, Smith, Heskin & Banister, 1976; Gendreau, Madden & Leipziger, 1979; Walters, 2003; Walters, Trgovac, Rychlec, DiFazio & Olson, 2002; Wormith, 1984; Zamble, 1992).

Moreover, the great majority of the literature on the effects of imprisonment rests on single-occasion and cross-sectional studies, some of which extend over long time periods (see Bonta & Gendreau, 1990; Wormith, 1984). These cross-sectional designs often assume that change occurs in a linear fashion at the same rate across individuals.

The purpose of this research⁴ was to generate evidence that follows the progress of inmates while incarcerated and assesses whether their program activities over time are predictive of institutional misconduct and recidivism.

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Longitudinal studies have considerable implications for prison case management practices. First, they allow us to examine whether offenders' behaviour in prison and changes therein are predictors of recidivism. Much of parole decision making is predicated on this assumption (Glaser & Stratton, 1972). Furthermore, the principles of effective treatment can be tested as to their applicability to prison settings (see Andrews & Bonta, 2003; Gendreau, 1996). More specifically, we can examine whether programs that target the criminogenic needs of higher risk offenders have

better effects on recidivism. Finally, the magnitude of the recidivism effect size of criminogenic programs can be compared to that of other "routine" treatment programs (e.g., Lipsey, 1999).

Method

Sample

The sample for this study included a total of 5,469 adult male offenders who: 1) had served a minimum of six consecutive months in a federal penitentiary in Canada (the maximum was over 10 years with a mean average of 31.2 months); 2) had been released into the community between January 1, 1999, and December 31, 2001; and 3) had an official record available for verification of recidivism.

Outcome data and data on the within-prison variables of interest were extracted from the computerized database (Offender Management System, or OMS) maintained by Correctional Service Canada (CSC) in accordance with its policies and procedures.

Independent variables

Demographic characteristics. Information was available on the age, race, marital status, level of education, and previous criminal history of each offender included in the database.

Composite risk measure. The Statistical Information on Recidivism-Revised (SIR-R1) Scale was used to classify the risk level of inmates included in this study. This scale combines measures of demographic characteristics and criminal history to generate estimates of the risk for recidivism among federally sentenced offenders (Bonta, Harman, Hann & Cormier, 1996).

Program participation. Criminogenic programs were those identified as employing behavioural approaches (e.g., radical behavioural, social learning, cognitive) and/or targeting criminogenic needs. Non-criminogenic programs were those identified as either: 1) not behavioural in nature (e.g., non-directive, psychodynamic, group milieu); and/or 2) targeting non-criminogenic needs (e.g., self-esteem, personal distress).

The first author and a second rater were involved in categorizing programs as criminogenic or non-criminogenic. While the raters had access to the names/titles of programs via the OMS database, they did not have access to the program manuals of individual programs. The agreement among the two raters was greater than 90% in classifying programs as criminogenic or non-criminogenic. Programs for which adequate information was not available to designate the program as either criminogenic or non-criminogenic were not included in the analyses.

Dependent variables

Incidents and segregation. Two types of prison misconduct are represented in the OMS database, namely institutional incidents (e.g., possession of contraband, minor disturbance, assault on inmate, assault on staff) and segregation (which is reserved for inmates who commit the most serious infractions). The total number of institutional incidents in which the offender was identified as the perpetrator was used as an outcome variable. Similarly, the total number of placements in segregation was calculated for each inmate and used as an outcome variable. Placements in administrative segregation were excluded as these inmates are placed in lockup for their protection from others.

Revocation and reincarceration. Two official measures of recidivism, revocation and reincarceration, were downloaded from OMS for the follow-up period of two years post-release from prison. Revocation included both technical violations of parole conditions as well as the commission of new crimes, while reincarceration involved readmissions to prison under a Warrant of Committal for a new crime only.

Results

Demographic characteristics

The average (mean) age of the sample was 34.6 years [standard deviation (*SD*) = 10.90] with a range of 16 to 81 years. Most inmates were Caucasian (83.3%). Approximately half of the sample (55.8%) was identified as single, separated, divorced or widowed, while 43.8% were married or living common law. Most of the inmates (67.2%) did not possess a high school diploma or equivalent.

About 37.4% had been convicted of a violent offence as part of their current sentence. About two thirds had been previously convicted of an offence. Specifically, 6.9% had one previous offence on their record, 12.9% had two to four previous offences, 13.4% had five to nine previous offences, and 23.6% had ten or more previous offences on their record.

As to their risk level, 13.5% of the sample was classified as low risk, 41.1% was classified as moderate risk, and 45.4% was classified as high risk.

During the follow-up period, 44.5% had their parole revoked for a technical violation, while 28.8% were reincarcerated for a new crime. About one quarter (25.1%) were both revoked for a technical violation and reincarcerated for a new crime. Taken together, almost half of the inmates (48.2% or 2,638) recidivated.

Program participation and recidivism

The analyses were based on Pearson *r* correlations and the use of confidence intervals (*CI*s) to assess and compare the utility of individual effect sizes and comparisons among predictors and treatments. Data was evaluated by examining the magnitude of effect sizes (i.e., correlations between criterion and outcome) and the width of *CI*s. A *CI* with a width greater than .10 was defined as warranting caution for the purposes of making policy (see Smithson, 2003).

Tables 1 and 2 summarize the degree to which criminogenic and non-criminogenic programs predicted outcome across the three risk levels.

Criminogenic programs and risk level. Tables 1 and 2 indicate that, for *low-risk* offenders, criminogenic programs were associated with an *increase* in institutional incidents, segregation and revocation. The correlations (*r* values) ranged between .05 and .14. The width of the *CI*s was greater than .10. For *moderate-* and *high-risk* offenders, criminogenic programs were associated with *decreases* in segregation, revocation and reincarceration (*r* values between -.02 and -.11). The width of the *CI*s was less than .10.

Non-criminogenic programs and risk level. Non-criminogenic programs were associated with an *increase* in all measures of misconduct and recidivism for *low-risk* offenders (*r* values between .04 and .11). The width of the *CI*s was greater than .10. For *moderate-* and *high-risk* inmates, non-criminogenic programs were associated with *increases* in every measure except revocation among moderate-risk inmates, where there was no association. The effect was most pronounced for incidents and segregation (*r* values between .12 and .19). The width of the *CI*s was less than .10.

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Table 1

Correlations between Program Participation and Misconducts by Risk Level

	N	Incidents		Segregation	
		r	CI	r	CI
Criminogenic programs					
Low-risk offenders	622	.14**	.06 to .22	.05	-.03 to .13
Moderate-risk offenders	2,004	.13**	.09 to .17	-.04	-.08 to .00
High-risk offenders	2,203	.03	-.01 to .07	-.05	-.09 to .01
Total	4,936	.09**	.06 to .12	-.03	-.06 to .00
Non-criminogenic programs					
Low-risk offenders	622	.05	-.03 to .13	.07	-.01 to .15
Moderate-risk offenders	2,004	.19**	.15 to .23	.12**	.08 to .16
High-risk offenders	2,203	.14**	.10 to .18	.15**	.11 to .19
Total	4,936	.16**	.13 to .19	.13**	.10 to .16

r = Pearson correlation coefficient

CI = confidence interval

**p < .01

Table 2

Correlations between Program Participation and Recidivism by Risk Level

	N	Revocation		Reincarceration	
		r	CI	r	CI
Criminogenic programs					
Low-risk offenders	622	.06	-.02 to .14	-.01	-.09 to .07
Moderate-risk offenders	2,004	-.02	-.06 to .02	-.09**	-.13 to -.05
High-risk offenders	2,203	-.04	-.08 to .00	-.11**	-.15 to -.07
Total	4,936	.02	.01 to .05	-.05**	-.08 to -.02
Non-criminogenic programs					
Low-risk offenders	622	.04	-.04 to .12	.11**	.03 to .19
Moderate-risk offenders	2,004	.00	-.04 to .04	.02	-.02 to .06
High-risk offenders	2,203	.02	-.02 to .06	.03	-.01 to .07
Total	4,936	.05**	.02 to .08	.06**	.03 to .09

r = Pearson correlation coefficient

CI = confidence interval

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

Table 3 presents another approach to analyzing the link between programming and recidivism. Whereas the previous analyses correlated the total number of criminogenic or non-criminogenic programs received by an inmate with an outcome (misconduct or recidivism), Table 3 presents a *density* or *difference score*. This is the number of criminogenic programs *minus* the number of non-criminogenic programs that each inmate received. If the resulting score is a positive value (e.g., +1), it means the inmate had taken more criminogenic than non-criminogenic programs. If the result is a negative

value (e.g., -1), it means the inmate had taken more non-criminogenic than criminogenic programs. Presumably, the greater the ratio in favour of criminogenic programs, the better the result.

Consistent with this hypothesis, the results in Table 3 reveal that the higher the ratio of criminogenic to non-criminogenic programs, the lower the recidivism rate. With one exception (0 vs. -1), there was a progression of less recidivism the more criminogenic programs taken.

Table 3

Comparison of Recidivism Rates for Inmates Receiving More versus Less Criminogenic Programming^a

	<i>N</i>	% Recidivists
Difference score ^b		
+2 and above	2,104	25.7
+1	1,165	27.5
0	1,443	33.3
-1	150	31.3
-2 and below	74	50.0

^a Higher difference scores indicate more criminogenic than non-criminogenic programming.

^b Difference score = total # of criminogenic programs minus total # of non-criminogenic programs.

Discussion

A problem that often occurs with large databases to be found in any social service agency has to do with record-keeping procedure. In this study, there was some data missing as well as a lack of standardization for reporting some variables. More information on the nature of various treatments employed within the prisons would have been helpful. It should be noted, however, that the OMS data system of CSC was not initially designed as a research tool.

Furthermore, generalization of these results is limited to male offenders who were incarcerated during the timeframe of study. It should be recognized that the profile of male offenders being admitted to federal prisons in Canada since 2001 might be changing somewhat. Prison systems are not necessarily static; they can evolve in their ways of handling offenders, which in turn can affect the therapeutic integrity of treatment.

Lastly, a meta-analytic perspective regarding the current results merits comment. That is, primary studies are not ends in themselves; oftentimes their contributions are quite modest (Schmidt, 1992). Replication is necessary, even for a study with a large sample size like this one, not only for the reasons noted previously but also because the estimated precision of some of the treatment effects for lower risk offenders in this investigation (as indicated by the CIs) is not yet adequate. In our opinion, some of the effect size estimates must be narrowed if one is to have enough certainty to responsibly generate policies for managing prisons more effectively (see Gendreau, Goggin & Smith, 2000).

The limitations of this study notwithstanding, to date only a handful of studies have examined changes in offender behaviour in prison (Bonta &

Gendreau, 1990). Moreover, these studies were conducted years ago, with small samples and over brief time periods. As such, the results of this study contribute to the existing literature by confirming the principles of effective intervention. First, criminogenic programs were associated with an increase in institutional incidents for low-risk offenders, smaller increases in segregation and revocations, and little relationship with reincarceration. This result for post-release recidivism outcomes is consistent with the offender treatment literature where it has been reported that offender treatment programs have very little effect among lower risk offenders or sometimes produce marginal increases in anti-social behaviours (Andrews & Bonta, 2003; Andrews, Bonta & Hoge, 1990).

Second, low-risk prisoners do not benefit, and

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may be adversely affected (as evidenced by increased misconducts and recidivism), as a result of being exposed to programming, particularly of a non-criminogenic nature. The results also suggest that lower risk offenders should be diverted from prisons as much as possible. This suggestion has been made repeatedly in corrections literature and has gone largely unheeded. For example, Bonta and Motiuk (1992) have documented how often low-risk offenders have been unnecessarily incarcerated (e.g., the estimates can be disconcerting, up to 38%). The width of CIs for much of the data reported for low-risk inmates in the study is large, however, thereby indicating the need for further replication of the results.

Third, a wealth of literature has demonstrated that higher risk offenders benefit from criminogenic programs (Andrews & Bonta, 2003; Gendreau, 1996; Gendreau, Goggin, French & Smith, 2006). The results from this study ($r = -.11$, $CI = -.15$ to $-.07$) were consistent with previous research.

While the effect sizes reported in this article – that is, the impact that program participation seemed to have on misconducts and recidivism – may not seem large at face value, it should be noted that the corrections literature is replete with examples that small effect sizes (5% to 10%, sometimes less, see Cohen, 1998) have major cost-benefit implications. The present results were better than Lipsey's (1999) results for routine programs and similar to the

German and UK prison programs (Egg, Pearson, Cleland & Lipton, 2000; Ortmann, 2000). Furthermore, the present results may represent underestimates since virtually every inmate admitted to a federal penitentiary is enrolled in a program, thus not allowing for a “pure” comparison of offenders who took programs versus none at all.

Finally, non-criminogenic programs definitely had negative effects on higher risk inmates in the present study, indicating that the types of programs higher risk offenders receive while incarcerated should be carefully vetted. ■

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