

CORRECTIONAL SERVICE CANADA

CHANGING LIVES. PROTECTING CANADIANS.

Development and Validation of a Criminal Risk Index (CRI) for Federally Sentenced Offenders in Canada

Correctional Service of Canada has developed an efficient and valid CRI to assign levels of program intensity.

Why we did this study

Using the most appropriate assessment tools for correctional program referrals has been identified as an issue in reports by the Auditor General of Canada. This led the Correctional Service of Canada (CSC) to develop an efficient and valid instrument called the Criminal Risk Index (or "CRI") to assign program intensity (no/low, moderate, or high) levels based on likelihood of re-offending upon release.

What we did

CSC uses a comprehensive, systematic and automated Offender Intake Assessment (OIA) process to produce an individualized Correctional Plan for all federally sentenced offenders. The OIA has two core components; Static Factors Assessment (SFA) and Dynamic Factors Identification and Analysis-Revised (DFIA-R). One subcomponent of the SFA, the Criminal History Record, is comprised of 38 indicators covering previous youth and adult criminal justice system involvements as well as current offence(s). Summed together, these yield a total score that reflects the nature and extent of an offender's involvement with the criminal justice system. The CRI and 5 risk level groupings were developed and derived from Criminal History Record data contained in CSC's Offender Management System.

The construction of a database for creation and validation of the CRI entailed the compilation of six complete fiscal years (2006/07 to 2011/12) of first release cohorts (men = 24,978 and women = 1,497; Indigenous = 5,526) for a total of 26,475 federal cases. The research data file was supplemented with the addition of post-release outcome data (return to federal custody for any offence within a 3 year follow-up period) and the extraction of all Static Factors - Criminal History Record items, the Statistical Information on Recidivism-Revised 1 (SIR-R1) scale release risk scores, Custody Rating Scale security level designations, Reintegration Potential ratings and other case characteristics (discretionary/non-discretionary release and major offence type).

What we found

This study has re-established that criminal history information derived from CSC's automated OIA process can be quantified in ways that accurately reflect relative

risk estimations. In this study the CRI significantly predicted post-release re-offending for both men and women offenders.

Table. Groupings, Scores and 3 Year Re-Offence Rates

Group	Scores for Men	Re-offence Rate	Scores for Women	Re-offence Rate
1	1 to 7	6%	1 to 4	5%
2	8 to 13	13%	5 to 8	7%
3	14 to 17	22%	9 to 13	14%
4	18 to 21	30%	14 to 18	16%
5	22+	37%	19+	30%
Total		21%		13%

Psychometric analyses also revealed acceptable predictive estimates for various subpopulations such as Indigenous, homicide, robbery, sex and drug offenders. Moreover, the CRI predicted discretionary release and failure. Convergent validity estimates were also established between the CRI and other measures of release risk. For example, the CRI was found to be highly correlated with the SIR-R1.

What it means

With the growing demand for correctional programs at varying levels of intensity, efficient and valid risk of re-offending separately for men and women assessment procedures are needed. Auto-populated assessments such as the CRI that transform existing repositories of offender information can serve as the foundation for computer-assisted case management analysis.

For more information

Motiuk, L., & Vuong, B. (2018). Development and Validation of a Criminal Risk Index (CRI) for Federally Sentenced Offenders in Canada (Research Report R-403). Ottawa, Ontario: Correctional Service of Canada.

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