

CORRECTIONAL SERVICE CANADA

CHANGING LIVES. PROTECTING CANADIANS.

Criminal Risk Index Validation for Indigenous and Non-Indigenous Men

The CRI yielded excellent predictive validity in relation to federal custody returns for both Indigenous and Non-Indigenous men.

Why we are doing this study

The Correctional Service of Canada (CSC) administers 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 & 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).

Previously published research has found that a Criminal Risk Index (CRI) comprised of the 38 Criminal History Record indicators yielded a total score and 5-level risk groupings that predicted both discretionary release and failure.¹ In practice, the CRI was developed to assist in appropriately referring men (Indigenous, Non-Indigenous and Inuit) to program stream and intensity level of the Integrated Correctional Program Model (ICPM) multi-target and sex offender programs. The purpose of this study was to confirm whether the 5-level groupings remained a robust predictor of recidivism when the validation data were disaggregated for Indigenous and Non-Indigenous men.

What we did

Based on the CRI development data, a total of 24,972 men first releases (4,850 Indigenous and 19,996 Non-Indigenous) were gathered over a six-year period (2006-07 to 2011-12) and followed-up for returns to federal custody for any offence within a 3-year period. Cramer's V and Area under the Curve (AUCs) were computed for overall men, Indigenous and Non-Indigenous.

What we found

The CRI combined score 5-level groupings with their respective rates of re-offence were psychometrically analyzed. As the table below reveals, from lower to higher risk there were substantive increases in re-offence rates as reflected by increasing base rates. Cramer's V was found to be statistically significant ($p < .0001$) and very strong (> 0.25) across all men, Indigenous and Non-indigenous (0.2709, 0.2240 and, 0.2660, respectively). In addition, the AUCs reflected acceptable levels of associations with the 5-level risk groupings for men. This is, 0.688 overall, 0.644 for Indigenous and 0.692 for Non-Indigenous men.

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

Group	Scores for Men	Re-offence Rate for All Men (N=24,972)	Re-offence Rate for Indigenous (N=4,850)	Re-offence Rate for Non-Indigenous (N=19,996)
1	1 to 7	6%	12%	5%
2	8 to 13	13%	18%	13%
3	14 to 17	22%	28%	21%
4	18 to 21	30%	34%	28%
5	22+	37%	42%	35%
Total		21%	30%	19%

Note: All men includes 126 cases missing race.

¹ Motiuk, L.L. & Vuong, B. (2018). The Development and Validation of a Criminal Risk Index (CRI) for Federally-sentenced Offenders in Canada. Research Report 403. Ottawa: Correctional Service Canada.

What it means

Re-offence rate distributions of the CRI groupings and psychometric analyses yielded excellent predictive validity estimates for federally-sentenced men, whether Indigenous or Non-Indigenous.

A highly predictive criminal history record instrument such as the CRI can serve as the foundation for the efficient assignment to varying levels of intensity for ICPM (e.g., no program or low-, moderate- or high) for Indigenous and Non-Indigenous men. Consequently, the grouping of CRI scores into three program intensity referral levels such as: (1 to 7) - No Program* unless the offender meets criteria for an override to moderate intensity; (8 to 17) - Moderate Intensity; and (18 or more) - High Intensity makes empirical sense.

Finally, the CRI may also serve as efficient means to suggest early release potential. Further research on another sample of supervised first releases should help to revalidate and confirm the predictive utility of the CRI.

For more information

Please e-mail the [Research Branch](#). You can also visit the [Research Publications](#) section for a full list of reports and one-page summaries.

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