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To cite this article: Justice J. Hargrove & Kevin M. Gorey (04 May 2026): Sex Offender Treatment Programs in Canadian Prisons: Synthesis of Best Evidence on the Prevention of Recidivism, Justice Evaluation Journal, DOI: [10.1080/24751979.2026.2660676](https://doi.org/10.1080/24751979.2026.2660676)

To link to this article: <https://doi.org/10.1080/24751979.2026.2660676>



Published online: 04 May 2026.



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Sex Offender Treatment Programs in Canadian Prisons: Synthesis of Best Evidence on the Prevention of Recidivism

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ABSTRACT

This rapid review synthesized the best available evidence on the effectiveness of Canadian prison-based sex offender treatment programs in preventing recidivism. Its sampling frame of 18 previous worldwide systematic and or meta-analytic reviews, as well as a host of computerized research literature databases, was searched using a broad keyword search scheme until January 2026. Nine studies of 3,568 male sexual offenders were included for analysis, all observational quasi-experiments that most typically followed their participants for 11.5 years. In support of the primary study hypothesis, the pooled, sample-weighted risk ratio of 0.40 (95% confidence interval 0.29, 0.56) seemed strong evidence that such sex offender treatment programs may be highly effective in preventing sexual reoffending. This preventive fraction estimates that they may prevent as many as 60% of all such sexual offenses that might otherwise be perpetrated by such men after their release back into communities. A systematically replicating study using the most recent clinical methods as well as the most rigorous, randomized controlled methods, is recommended. It would go a long way to inspire all, policy makers to publics, of the practical benefits of sex offender treatment programs in prisons, for both the offenders themselves and the communities they return to.

ARTICLE HISTORY

Received 19 September

2025

Accepted 26 March 2026

KEYWORDS

Canada; meta-analysis;
prison; rapid review;
recidivism; sex offender

Background

While the neighboring United States focuses on harsh sentences with long prison stays, Canadian correctional programming has maintained focus on rehabilitation by relying on community support, reintegration strategies, and less time served within correctional institutions (Doob & Webster, 2016; Lussier & McCuish, 2024). There is evidence that these community-based measures have been effective at reducing recidivism for offenders in general, perhaps more so than institutional measures (Lösel & Schmucker, 2005; Luong et al., 2012; Olver et al., 2020; Schmucker & Lösel, 2017). Despite this, within Canada there is growing support for “tough on crime” strategies. These strategies seek to increase prison sentences and reduce spending on community

programming (Baumgartner et al., 2021). With the increase in “tough on crime” rhetoric in the political discourse surrounding treatment for offenders, this review serves as a touchstone for Canadian policymakers seeking to make decisions for sex offender treatment options that balance evidence-based best practices and public trust. We seek to do this by analyzing the recidivism reduction efficacy of sex offender treatment programs within Canadian institutions.

Sex offender treatment programs in this context are defined as therapeutic or psychosocial interventions delivered while offenders are in custody, specifically within prison or other, similar carceral facility; these programs are typically based on cognitive-behavioral and relapse prevention principles and models (Abracen et al., 2011; CADTH 2020; Looman et al., 2000; Olver et al., 2020). Programs can be delivered in both individual and group formats. The phrase “sex offender treatment program” is an umbrella term, and though many programs operated under Corrections Service of Canada (CSC) guidelines, program content and quality may vary across institutions. Accordingly, in this review, prison-based is defined primarily by the custodial setting in which treatment is delivered, rather than by a single standardized curriculum implemented uniformly across all institutions. These programs seek to reduce “deviant sexual interests,” cognitive distortions, and social/intimacy skill deficits, increase victim empathy, and support planning for safe reentry and reintegration into community. These program goals support the larger sex offender treatment program goal of reducing or eliminating sexual reoffending (recidivism) rates, which is the primary outcome of interest in this rapid review and meta-analysis (CADTH, 2020; Looman et al., 2000; Olver et al., 2020). For the scope of this rapid review biomedical (pharmacological or surgical castration) or community-based treatments (any intervention not delivered within a carceral institution during a custodial sentence, regardless of mandate or supervision status) were not considered. Studies in this rapid review primarily evaluate outcomes based on sexual recidivism and violent recidivism, with a few studies looking at recidivism in general, and thus the definitions of recidivism or reoffence are study specific. In general, however, sexual recidivism can be defined as any new sexual crime committed post-release (Nicholaichuk et al., 2000). Across studies, recidivism was generally measured using arrest records of post-release reoffending.

According to the Canadian Agency for Drugs and Technologies in Health (2020), citing the Criminal Code of Canada, sexual offenses include “a wide range of criminal acts ranging from unwanted sexual touching to sexual violence resulting in serious physical injury or disfigurement for the victim. It includes sexual assaults, aggravated sexual assault and other sexual offenses addressing offenses primarily aimed at children. It is a heterogenous category involving child molesting, rape, exhibitionism, distribution and consumption of child pornography.” These acts cause significant short- and long-term physical, emotional, and social harm to victims, survivors, their families, and the community as a whole (CADTH, 2020; Hylton & Bird, 2006). Corăbian et al. (2024) observed that representative Canadians estimate the recidivism rates among adults who had sexually offended to be 50% higher than their actual recidivism rates. Such Canadians also seemed to largely favor “tough on crime” policies with long and harsh prison sentences for sexual offenders. Lussier and McCuish (2024) note that even if the perceptions of recidivism and risk are inaccurate, as discussed above, these offenses carry high stakes. Thus, policies and programs that prevent reoffence or recidivism are

of great importance. They also note that throughout the existence of Canadian policies regarding sex offender treatment, the goal has been to balance effective prevention strategies and public reassurance. There seems little to no evidence that such incarceration in and of itself impacts recidivism (Barnett & Fitzalan Howard, 2018; Baumgartner et al., 2021; Doob & Webster, 2016; Kim et al., 2016), but there seems to be some agreement in the field within the last 15 years that treatment programs specifically designed for adult sexual offenders are at least moderately effective at reducing sexual reoffending (Harrison et al., 2020; Kim et al., 2016; Olver, Marshall, et al., 2020; Olver, Nicholaichuk, et al., 2013; Schmucker & Lösel, 2015, 2017).

In Canada, offenders sentenced to incarceration for longer than two years serve in a CSC institution. Offenders serving shorter sentences serve in provincially administered institutions. The most recent available data indicates that more than half of sex offenders in Canada between 2015 and 2019 received sentences of approximately 180 days (Cotter, 2024). This could indicate that the offenders were considered low- to medium- risk and thus served their sentences in provincially administered institutions (low- to medium- security). Institutions within the CSC are generally reserved for higher-risk offenders (Canada, 2023). The literature on this subject is concentrated on programs that occurred within the CSC. Accordingly, the findings of this review should be interpreted as most directly applicable to federally sentenced (CSC) populations, rather than to provincially sentenced populations. Between 2015 and 2019 in Canada, it is estimated that over 940,000 sexual assaults took place, only 6% of these resulted in a police report (Cotter, 2024). The under-reporting for sexual offenses is higher than any other crime category (Hylton & Bird, 2006). 33,501 charges for sexual offenses in general were laid between 2015 and 2019. Less than half of these cases resulted in a guilty finding (Cotter, 2024). As mentioned above, more than half of these guilty findings will result in a prison sentence shorter than two years. Thus, in Canada, offenders who are reported, arrested, charged and found guilty, and subsequently sentenced to CSC custody are likely to represent a higher risk sub-population, and may have committed offenses involving multiple victims, or that the victims were children or otherwise vulnerable individuals. However, as indicated by Hylton and Bird (2006), Indigenous men are more likely to be over-represented within incarcerated populations due to an ongoing history of disproportionately harsh sentences for Indigenous and other racialized men.

Sex offender treatment programs initially operated through the CSC were well funded and had highly trained staff focused on treating high-risk sexual offenders within the prison context (Marshall & Marshall, 2021). In 2010, the CSC shut down these programs and replaced them with “significantly cheaper” approaches, including generalized custodial programs and post-release community-based programs (Marshall & Marshall, 2021; Motiuk, 2023). The CSC stated that it had become impossible to recruit qualified providers, although Marshall and Marshall (2021) note that qualified providers had previously delivered these programs prior to the shutdown. There is evidence to suggest that, in terms of recidivism, community-based sex offender treatment programming is more effective than in-prison programming, however there is also evidence suggesting that these programs are less effective when they are generalized (Lösel & Schmucker, 2005; Luong et al., 2012; Olver et al., 2020; Schmucker & Lösel, 2017). Budget and funding issues further compound questions around the

efficacy of these programs. This evidence, combined with a contemporary discourse focused on “tough on crime” policies, necessitates an examination of previous in-prison programs that may serve as a reference point for decision-making in the near future.

Although sex offender treatment has been studied internationally, a Canada-specific synthesis is warranted because Canadian correctional policy and post-sentence management differ in ways that may shape both program delivery and observed recidivism outcomes. For example, compared to the United States, Canada relies on different safeguards and monitoring practices, including a nonpublic sex offender registration system (Lussier & McCuish, 2024). Canada’s correctional landscape is also structured across provincial and federal systems, which affects who receives custodial programming and how programs are organized. Further, Indigenous peoples are overrepresented in custody due to longstanding structural inequities, raising important considerations for how institutional interventions are experienced and how outcomes are interpreted (Hylton & Bird, 2006). Hylton and Bird (2006) also note that Canada was considered a leader in sex offender treatment, yet despite these distinct contextual features relatively few studies have synthesized the effectiveness of institutional programs specifically within the Canadian correctional context.

While there is evidence of the efficacy of these programs, they are not free from valid criticism. Criticisms of these programs have been levied by anti-carceral feminist scholars who argue that sex offender treatment programs, in general, are reactive approaches that are removed from the structural causes of sexual violence (Brockbank, 2023). Some scholars suggest that the decreases in recidivism rates in similar “batterer intervention programs” can be attributed to offenders learning how to better hide from state surveillance and avoid legal and criminal consequences for their behavior. These claims could be consistent with the higher rates of recidivism found when measuring victim self-reports as opposed to arrest records (Cheng et al., 2021). These critiques raise important questions about the limits of custodial interventions. Even though these critiques are persuasive, incarceration remains an ongoing policy practice; evaluating the effects of treatment programs for incarcerated offenders is therefore best understood as a harm-reduction question rather than an endorsement of carceral responses.

This rapid review, a synthesis of the preventive evidence on sex offender treatment programs in Canadian prisons, aims to meet the needs of decision- and policy makers. Understandably, some victims of sexual offenses would desire punitive policies, however, a balance must be found between a desire for retribution and evidence-based, effective management of adults who have sexually offended (Lussier & McCuish, 2024; Nunes et al., 2007). There is evidence to indicate that in Canada and the United States, there has been a significant downward trend in sexual offense recidivism, indicating that harsher punishments and longer prison sentences may not be required (Lussier & McCuish, 2024).

Rapid Reviews Defined

Rapid reviews are a relatively recent, though recognized and legitimate, review type that grew in necessity and popularity during the COVID-19 pandemic (Healey et al., 2022; Kisely et al., 2020; Romero Starke et al., 2020). Their intended purpose is to

synthesize high quality and relevant data for use by practitioners and professionals in the social, medical, and policy fields, and to do so quickly (Grant & Booth, 2009). However, due to the prioritization of speed and efficiency, rapid reviews place strategic restrictions on the systematic review process and focus on a narrower scope than traditional systematic reviews. This review type, despite the perception of novelty, is recognized and legitimized by the Cochrane Collaboration, specifically for use in cases where decision making is the intended use of the research. In their guidelines and recommendations for researchers using rapid reviews, it is suggested that further analysis is included to strengthen findings. Meta-analysis is specifically suggested for use where the data permit (Garrity et al., 2024).

This rapid review was conducted to inform policymakers in Canada of the efficacy of sex offender treatment programs in the prison context. The rapid review produced enough quantitative data to justify the use of a meta-analysis. Previous rapid reviews have been done in both the fields of violence prevention and behavior change programs for male offenders (Neville et al., 2014; O'Connor et al., 2021). The potential for harm as a result of missteps in this field is significant, as such, decision- and policymakers require timely evidence on pressing questions. For these reasons, rapid review and meta-analysis were deemed the most appropriate with respect to both rigor and scope.

Review of Previous Reviews

In preliminarily scoping worldwide research literature in preparation for this study, we found 18 relevant, generally systematic, or meta-analytic reviews (Barnett & Fitzalan Howard, 2018; Belur et al., 2020; CADTH, 2020; Gannon et al., 2019; Harris & Hanson, 2004; Harrison et al., 2020; Heppell et al., 2022; Kim et al., 2016; Långström et al., 2013; Lösel & Schmucker, 2005; Mazza et al., 2020; Parhar et al., 2008; Perrin et al., 2018; Pryboda, 2015; Schmucker & Lösel, 2008, 2015, 2017; Wormith et al., 2007). They ultimately became a part of this rapid review's sampling frame and are noted with superscripts in the reference list. They identified hundreds of potentially relevant primary studies; however, nearly all of these were minimally five years antiquated, many much more so. This may be indicative of a larger trend within the field where similar programs are offered within the community, it appears that in-prison treatment may be falling out of favor.

The reviews nearly exclusively included studies accomplished in the global west; the majority USA studies with fewer from Europe, Canada, Australia, and New Zealand. None of these extant reviews exclusively reviewed Canadian studies, and those that did reviewed sexual offender interventions that had been accomplished a decade or more ago. This is important because Canada's corrections system differs significantly from that of the United States (Doob & Webster, 2016). Policymakers cannot make informed decisions using evidence synthesized from data that is unlikely to comport to the Canadian system. Recency matters in this case because the political and socio-cultural context in which sexual offending is discussed has changed substantially over the last decade. Public discourse on sexual violence has been increased by public campaigns like the #MeToo movement. Furthermore, recognition of the harms and

disproportionate impact on Indigenous and other racialized peoples has intensified continued debates regarding “tough on crime” policy responses to sexual violence. These shifts indicate a need for renewed attention to this field’s best evidence in order to effectively guide Canadian policy in a direction that effectively minimizes risk while still respecting the dignity and humanity of those impacted. Finally, these previous reviews consistently suggested modest preventive effects but were typically unable to produce compelling meta-analytic findings for the heterogeneity of their samples. This rapid review and meta-analysis aims to fill these knowledge gaps to the extent possible given the current status of the research literature in Canada. It will exclusively focus on reviewing and pooling the evidence of studies on the effectiveness of sexual offender treatment programs in Canadian prisons. Furthermore, it will endeavor to update and practically meta-analyze this field’s most contemporaneous data. Naturally, participant, program and research design characteristics may matter. Therefore, where data permits, exploratory moderator analyses will assess whether effects vary by such characteristics as participant age, program endowment (i.e., intensity and duration), research design (i.e., extent of control for potential alternative explanations), publication status (i.e., peer-reviewed article or dissertation), and length of follow-up.

Hypothesis

This literature review was driven by the hypothesis that adults who have sexually offended have reduced sexual recidivism rates when they receive treatment while serving a prison sentence within Canadian prisons.

Methods

Sampling Methods

Within temporal, budgetary, and human resource constraints, we performed a rapid review and meta-analysis (Deeks et al., 2021; Ganann et al., 2010; Tricco et al., 2015). A rapid review as defined by Grant and Booth (2009) “provides an assessment of what is known about a policy or practice issue, by using systematic review methods to search and critically appraise existing research.” This method was chosen as it allowed for a rigorous and systematic exploration of a segment of the field with respect to the significant constraints placed on the project. Federally run institutions were selected as the primary unit of analysis to allow for a broad scope of data within a relatively narrow context, however it introduces a limitation in that data from provincially run institutions is minimally included. Two complimentary, systematic sampling methods were used. First, leaning upon the resources of research teams around the world, we searched for relevant systematic reviews and/or meta-analyses from 2000 to 2025, aiming to identify relevant primary studies for our rapid review and meta-analysis from their ultimate analytic samples. Second, we augmented our review of previous reviews with contemporaneous searches of published, peer-reviewed research literature databases from 2020 to 2025, as is consistent with rapid review protocols (Garritty et al., 2024; Grant & Booth, 2009). These databases were searched

until January 1, 2026: *Canadian Business & Current Affairs Database (CBCA)*, *Inter-University Consortium For Political and Social Research (ICPSR)*, *National Bureau of Economic Research Publications (NBER)*, *National Criminal Justice Reference Service (NCJRS)*, *EconLit*, *Sociological Abstracts*, *Worldwide Political Science Abstracts*, *Cumulative Index of Nursing and Allied Health Literature (CINAHL) Complete*, *Cochrane Central Register of Controlled Trials*, *Cochrane Database of Systematic Reviews*, *Campbell Systematic Reviews*, *JSTOR*, *MEDLINE/Ovid & PubMed*, *PsycINFO*, *Social Work Abstracts* and *Social Service Abstracts*. So-called unreviewed and unpublished, grey literature sampling frames that might guard against publication bias were also searched (de Smidt & Gorey, 1997; Grenier & Gorey, 1998): *ProQuest Dissertations and Theses Global*, *Google Scholar*, *Research at Correctional Service Canada* and Google searches for other *Canadian Government Documents*.

Article titles and abstracts were searched with diverse iterations of this broad keyword search scheme: (sexual offender OR sexual predator OR sexual violence OR sexual assault OR rape OR sexual deviance OR sex crime) AND (prison OR jail OR incarceration OR imprisonment OR correctional service/facility) AND (treatment OR therapy OR intervention OR management OR rehabilitation or prevention) AND (sexual recidivism OR sexual reoffence OR repeat offender OR relapse). Such was the scheme in searching for relevant primary studies. In searching for relevant previous reviews, the following parameter was added to our systematic searches: (systematic OR scoping review OR meta-analysis). As we were ultimately searching for relatively controlled comparisons of the effectiveness of treatment programs for sexual offenders in Canadian prisons, studies were screened for the following focused and rigorous inclusion criteria: Minimally be quasi-experimental studies that in addition to a treated group also include a comparison group, accomplished in Canada (meaning focused on the Canadian carceral system). Finally, there were additional exclusion criteria: qualitative studies published prior to 2000 published in languages other than English. The bibliographies and first and anchor authors of retrieved studies were then snowball-searched for additional eligible studies.

The study selection process, cross-validated by two cooperating reviewers, found 18 previous reviews and then nine primary studies for this rapid review and meta-analysis (Abracen et al., 2011; Hanson et al., 2000; Looman et al., 2000; Nicholaichuk et al., 2000; Olver et al., 2013, 2020; Seager et al., 2004; Stewart et al., 2015; Ternowski, 2004). They are noted with superscripts in the reference list. A preferred reporting items for systematic reviews and meta-analyses (PRISMA) outline of the study selection process is displayed in Figure 1 (Kelly et al., 2016; Moher et al., 2009). It may be additionally noted that the 2020–2025 database searches actually produced five conceptually relevant studies, however, four of them did not minimally include a nontreated or other comparison condition so they were ineligible for this controlled rapid review and meta-analysis. Two independent reviewers performed databases searches and screened articles for relevance to the research hypothesis. The two reviewers initially agreed on most of the primary studies to be included (83.3%). Accuracy was assured *via* investigator triangulation; disagreements were resolved through careful analysis and reference to the inclusion and exclusion criteria. Consensus (100%) was reached through discussion between the reviewers without the use of machine-assistance.

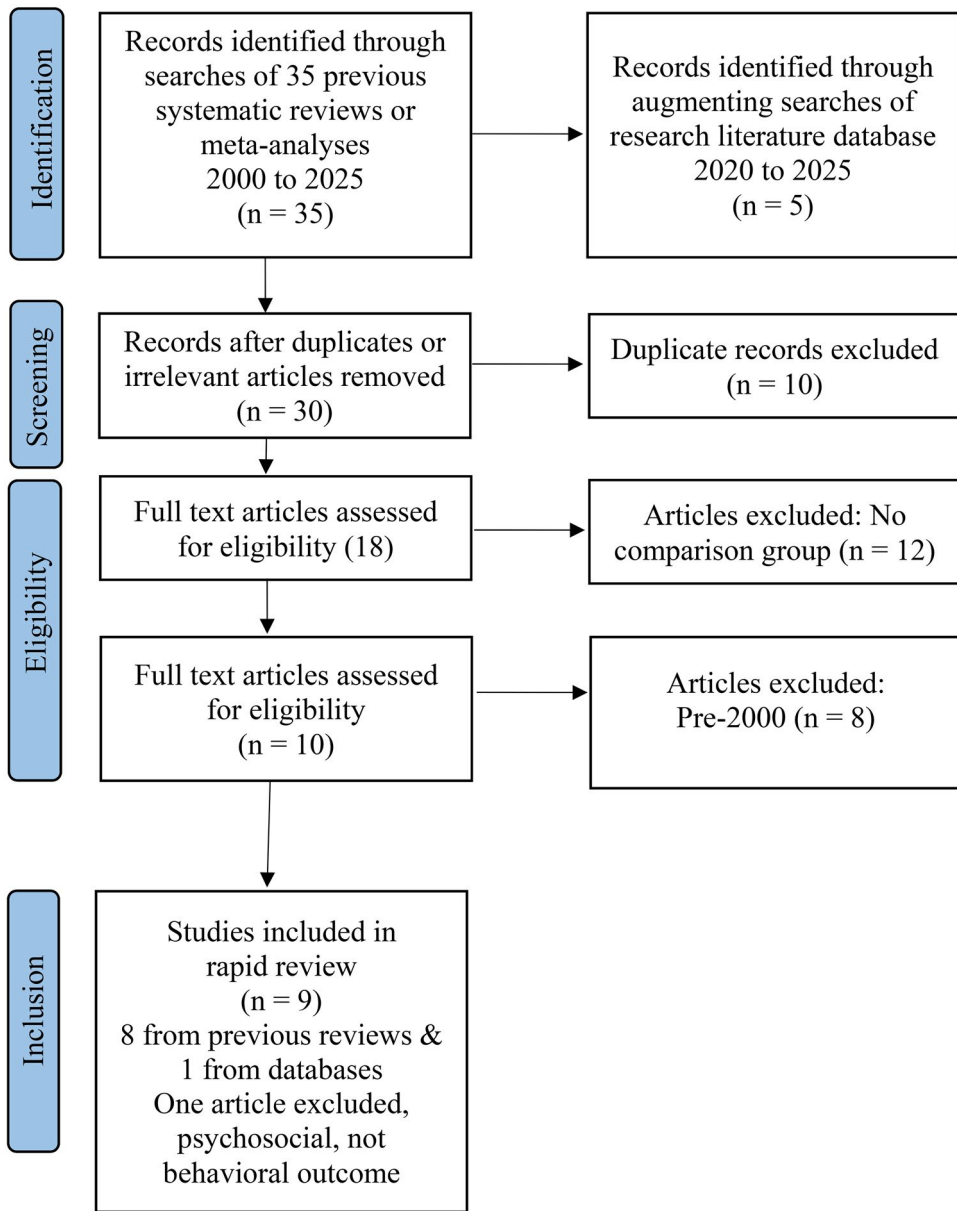


Figure 1. PRISMA Flow diagram of the study sampling process.

Meta-Analytic Plan

Recidivism outcomes were extracted using the statistics reported in each study. Outcomes were typically based on post-release records, although the specific definition of recidivism varied across studies and was recorded as reported. Potential moderator comparisons for discrete bivariate variables were straightforward (e.g., journal articles versus dissertations, retrospective cohorts versus quasi-experiments). While continuous potential moderators were dichotomized at practical median breaks to maximize

meta-analytic power and to emphasize practical significance (e.g., follow-up of less than 10 years versus 10 or more years).

The unit of analysis for this synthesis was the unique hypothesis. First, the primary studies tested the hypothesis that sexual offender treatments prevented or reduced sexual recidivism. To synthesize these nine discrete behavioral outcomes, rate ratios, odds ratios, or similar measures of effect estimated primary study relative risks (RR). Natural logarithms of study RRs were weighted by their inverse variances so that larger studies carried more weight. Such sample-weighted, random effects were then pooled using sample weighted regression models (Cooper, 2017; Fleiss et al., 2003; Greenland, 1987). Pooled RRs within 95% confidence intervals (CI) were calculated from regression statistics, as were tests of heterogeneity and between-groups synthetic comparisons, distributed as χ^2 and I^2 statistics. All statistical significance decisions were made at the α criterion of 0.05 though findings that approached statistical significance were also noted (α criterion of 0.10). For ease of directional interpretation, all RRs less than 1.00 were essentially preventive fractions indicating that sexual recidivism rates were lower in the treated groups than in the comparison groups. Second, six of the primary studies tested the additional hypothesis that sexual offender treatments prevented or reduced violent crime recidivism. This adjunct synthesis was accomplished similarly to the first. These syntheses were accomplished with version 3 of Comprehensive Meta-Analysis (Borenstein et al., 2013) by two cooperating, reviewer analysts.

Results

Sample Description

Descriptive characteristics and outcomes of the nine studies related to this study's first hypothesis are displayed in Table 1. All except two were reported in peer-reviewed journals between 2000 and 2020. Those other two were dissertation studies. Six of the studies sampled inmates in a single prison, one sampled across Ontario while two were national studies. Besides the Canadian national studies only two studies sampled specifically outside of Ontario, one each in British Columbia and Saskatchewan. Moving across the table from left to right, it can be seen that though not typically described in much detail, it seems that the sexual offender treatment programs were quite well endowed at least in terms of their professional therapeutic staff-inmate/client contact hours. These seemed mostly to be more than 100 total contact hours and not atypically over 200 to even more than 300 h. It should also be noted that the actual clinical practices reported were typically antiquated, having been mostly accomplished in the 1970s, 1980s and 1990s, and the most contemporaneous study outcome endpoint was observed in 2013, more than a decade ago now. All of the studies were exclusively of men and only four studies reported racialized ethnic group distributions. Among the four that did, Indigenous Peoples seemed well represented, ranging from 22% to 100% of the inmate/client samples, most typically representing about half of them. Finally, though only six studies so reported, it seemed that all of the study participants were volunteers. None seemed mandated to participate.

Table 1. Descriptive characteristics and behavioral outcomes of studies of sex offender treatment programs in Canadian prisons.

Citation/Place	Treatment Program Intensity & Duration Demographics Time Frame	Research Design Comparison Group, FU Length Analytic Samples Number Covariates	Outcome Measures	Outcomes:Reoffence Rates Effect Sizes RR (95% CI)
Oliver et al., 2020 Kingston, ON vs. All of Canada	CBT/RNR/SBA 10h/week, 4–5 months M _{age} 44 1991 to 2013	Retrospective cohort Untreated, ^a M = 10 years 579 & 107 Age, BARS-M, victim Type & Length FU	Sexual recidivism ^b Violent recidivism	AOR = 0.17 (0.09,0.35) AOR = 0.17 (0.11, 0.28)
Stewart et al., 2015 Gravenhurst, ON	Tupiq program 18 weeks, 290 hours 100% Inuit 2001 to 2009	Retrospective cohort No/another program, M = 2.5 years 61 & 1142 risk measures, education employment plus 3 others	Sexual re-offenses Violent re-offenses	4.9% vs. 11.4% HR = 0.40 (0.11, 1.42) 31.3% vs. 35.1% HR = 0.60 (0.35, 1.02)^e
Oliver et al., 2013 All of Canada	Any sex offender treatment program M _{age} 42	Retrospective cohort No program, M = 11.5 years 732 & 107Age,	Sexual recidivism Violent recidivism	10.7% vs. 20.2% HR = 0.47 (0.27, 0.80) 26.5% vs. 44.2% HR = 0.45 (0.29, 0.73)
Ferguson et al., 2009 Kingston, ON vs. All of Ontario	RTCSOTP volunteers CB-Relapse Prevention 2h/day, 7 months Mage 31, high risk 1993 to 2007	BARS & follow-up length Quasi-experiment Untreated, M = 10 years 64 & 55 Matched: age, PCL-R score ^c & type sexual offender	Sexual Recidivism	12.5% vs. 9.1% OR = 1.37(0.55, 3.20)
Seager et al., 2004 All of Ontario	Sex offender treatment 4h/day, 5 days/week 5 months 65% Aboriginal 1995 to 1999	Retrospective Cohort Non-completers, ^d M = 2 years 109 & 37 Static 99 risk measure	Sexual or violent re-offense ^b Majority sexual re-offenses	4.6% vs. 32.4% RR = 0.14 (0.06, 0.33)
Ternowski et al., 2004 Mission, BC	Stave Lake Correctional sexual offender treatment: Group individual & psych volunteers M _{age} 43, 22% Aboriginal 1994 to 2003	Retrospective cohort Untreated, M = 5.5 years 224& 43 Static 99 risk measure	Sexual recidivism Violent recidivism	HR = 0.48 (0.19,1.21) HR = 0.37 (0.17, 0.81)

(Continued)

Table 1. Continued.

Citation/Place	Treatment Program Intensity & Duration Demographics Time Frame	Research Design Comparison Group, FU Length Analytic Samples Number Covariates	Outcome Measures	Outcomes:Reoffense Rates Effect Sizes RR (95% CI)
Looman et al., 2000 Kingston, ON	RTCSOTP volunteers M _{age} 28 1976 to 1996	Quasi-experiment Untreated, M = 10 years 89 & 89	Sexual recidivism Nonsexual recidivism	23.6% vs. 51.7% OR = 0.46 (0.31, 0.68) 61.8% vs. 74.2%
Nicholaichuk et al., 2000 Saskatoon, SK	CBT volunteers 6-8 months M _{age} 29, 36% Indigenous 1983 to 1996	Matched age & 5 risk indicators Quasi-experiment Untreated, M = 6 years 296 & 283 Matched: age & date offense & Prior criminal history	Sexual re-offenses Violent re-offenses	OR = 0.83 (0.67, 1.02)^e 14.5% vs. 33.2% OR = 0.44 (0.32, 0.60) 16.2% vs. 18.0% OR = 0.90 (0.47, 1.71)
Hanson et al., 2000 Reanalysis of Nicholaichuk et al., 2000	Otherwise same 1987 to 1996	Sample restriction to Minimize attrition bias	Overall re-offenses Majority sexual re-offenses	13.1% vs. 24.3% OR = 0.47 (0.29, 0.76)

Notes. AOR, adjusted odds ratio; BARS-M, modified brief actuarial risk scale; CBT, cognitive behavior therapy; CI, confidence interval; FU, follow-up; M, mean; HR, hazard ratio; ON, Ontario; OR, odds ratio; PCL-R, Hare Psychopathy Checklist-Revised; RNR, risk-needs-responsivity; RR, rate ratio or risk ratio; RTCSOTP, Regional Treatment Center Sex Offender Treatment Program; SK, Saskatchewan; SMA, strengths-based approach.

^aTreatment refusers, treatment not available in their prison or their sentences were too short to allow for treatment completion.

^bTreatment effects, that is, the preventive fractions, were largest for those offenders at greatest risk.

^cMore than a quarter of the study sample (26%) met the definition of psychopath. Moreover, the author herself noted that the “treated sample was selected on the basis of being a high need group and represent a much higher need population when compared to the control group. It is, therefore, reasonable to assume that although matched on various domains, the treated group represented a slightly higher risk group.”

^dRefused treatment or dropped out.

^ep < .10 or 90% CI did not include the null value.

All nine of the studies were nonrandomized, essentially all quasi-experiments, either nonequivalent group designs or retrospective observational cohorts. Though the aggregate sample of study participants was quite large (3,568), seven of the study groups, treated or untreated, had less than 100 participants, five of these with close to 50 or fewer participants. Many were probably grossly underpowered as they aimed to provide some measure of control for multiple covariates through matching, sample restriction, or regression modeling. Finally, follow-ups ranged from two to more than 10 years (median = 11.5). Four studies followed their participants for 10 or more years after their release from prison, the remainder for less than 10 years, most typically for five and a half years. This allowed for exploratory testing of potential fade-out effects.

Main Meta-Analytic Findings

Evidence related to the testing of the first study hypothesis specific to the effectiveness of sexual offender treatment programs within Canadian prisons to prevent sexual recidivism is displayed in Table 2. One can see that six of the nine outcomes were statistically significant, while three were null (i.e., 95% CI included the null value of 1.00) with relative risk estimates ranging from 0.14 to 1.37 ($RR_{Mdn} = 0.46$). Furthermore, the pooled, sample-weighted risk ratio of 0.40 (95% CI 0.29, 0.56) seems strong evidence that such programs may be highly effective in preventing sexual reoffending. In fact, the pooled estimate suggests that they may prevent as much as 60% of all such sexual offenses that may otherwise be perpetrated by such men after their release back into communities. It should also be noted that the distribution of the

Table 2. Effectiveness of sex offender treatment programs in Canadian prisons: Prevention of sexual recidivism.

Study name	Statistics for each study				Risk ratio and 95% CI
	Risk ratio	Lower limit	Upper limit	p-Value	
Ferguson, 2009	1.37	0.55	3.41	0.50	
Ternowski et al., 2004	0.48	0.19	1.21	0.12	
Olver et al., 2013	0.47	0.27	0.81	0.01	
Hanson & Nicholaichuk, 2000	0.47	0.29	0.76	0.00	
Looman et al., 2000	0.46	0.31	0.68	0.00	
Nicholaichuk et al., 2000	0.44	0.32	0.60	0.00	
Stewart et al., 2015	0.40	0.11	1.44	0.16	
Olver et al., 2020	0.17	0.09	0.33	0.00	
Seager et al., 2004	0.14	0.06	0.33	0.00	
	0.40	0.29	0.56	0.00	

nine primary study outcomes was observed to be significantly heterogeneous; $\chi^2 (8) = 20.72, p = .008, I^2 = 61.4\%$, suggesting that some of the treatment outcome variability might be accounted for by participant, research design, or study contextual characteristics. Finally, these behavioral outcome measures, essentially archival crime statistics, were based upon administrative data, so they are not likely prone to bias that may intrude through self-reports.

As for the adjunct testing of the first hypothesis related to violent crime recidivism, it seemed to very closely replicate the findings on the prevention of sexual reoffences. Three of the six relevant study findings were statistically significant, two approached significance and one was null, RR point-estimates ranging from 0.17 to 0.90 ($RR_{\text{Mdn}} = 0.52$), $RR_{\text{pooled}} = 0.49$ (95% CI 0.28, 0.84). Finally, the two pooled risk ratios or preventive fractions, did not differ significantly between the prevention of sexual or violent recidivism: 0.40 versus 0.49, $\chi^2 (1) = 0.32, p = .57$.

Potential Moderations of the Main Meta-Analytic Findings

All potential moderations of the main meta-analytic findings by participant, research design and study contextual characteristics were explored to the extent possible. All were null, but most suffered, probably fatally, from a lack of statistical or meta-analytic power. Two of them, though seemed interesting, important, and adequately powerful as there was relevant valid data provided by all nine studies. First, there was no significant difference observed in the estimated sexual recidivism rates between study reports presented as journal articles or dissertations. Such suggests that publication bias is probably not a potent alternative explanation for this study's main meta-analytic findings. Second, there was no significant difference observed in the estimated sexual recidivism rates between studies that followed their participants for less than 10 years or for more than 10 years after their release from prison. Such suggests that the observed large benefits of sexual offender treatment programs offered in Canadian prisons are not likely to fade-out over time. They likely robustly stand for more than a decade after release.

Discussion

With this rapid review and meta-analysis, we responded to this field's need for a research synthesis unique to the Canadian context. It centrally synthesized the best available evidence on the effectiveness of Canadian prison-based sex offender treatment programs preventing recidivism. Its pooled meta-analysis of nearly 4,000 male sexual offenders, voluntary participants of nine non-randomized or quasi-experimental studies found strongly suggestive support for its primary hypothesis that such sex offender treatment programs are effective in preventing sexual reoffending. In support of this hypothesis, its pooled, sample-weighted risk ratio or preventive fraction, comparing the incidence of sexual reoffending at post-release follow-up between untreated and treated study groups was 0.40. This pooled estimate suggested that the experience of the preventive interventions probably prevented as many as 60% of any such sexual offenses that might otherwise have been perpetrated by members of the treated groups after their release back into communities. As for the secondary review

hypothesis, a similarly large preventive fraction also suggested a large preventive impact upon violent crime recidivism (0.49). Again, interventions were estimated to have prevented more than half of all such potential violent crime re-offenses. Finally, moderator analyses also suggested that such large preventive impacts probably could not be accounted for by publication bias and that they were probably robust to diminishments by fade-out effects. Pooled treatment effects did not differ significantly between published, peer-reviewed studies and so-called grey literature dissertations, and pooled treatment effects were maintained throughout the typical study follow-up period of a decade or more.

As for external validity and representativeness, it should be noted that all of the study participants were male volunteers, and most were members of the general prison population. Four studies ensured that Indigenous men were well represented, but their specific treatment effects were not tested. Therefore, this review's central findings seem most generalizable to white men who volunteered to participate in the prison-based sex offender treatment programs they were offered. Also of note, the intervention practices that comprised the treatment programs were quite antiquated, having been accomplished during the 1970s to 1990s, and the most contemporaneous study endpoint was observed more than a decade ago in 2013. Overall, then, though this rapid review's pooled quasi-experimental evidence seems strongly suggestive, it may not inspire confidence among some. A systematically replicating study using the most recent clinical methods (Levenson et al., 2020; Olff et al., 2025; Siglag, 2024) as well as the most rigorous, randomized controlled methods probably will be needed to substantially bolster confidence among most, if not all, researchers, clinicians, policy analysts, and publics. In fact, it seems very likely to us that incorporating the latest and most innovative treatment methods may actually lead to preventive effect sizes that are substantially larger than those already observed.

Implications for Practices and Policy

Our main findings suggest that well-resourced treatment programs designed specifically for the treatment of sexual offenders are effective at reducing sexual and violent reoffending. This is in line with the majority of findings from work focused on contexts outside of Canada. Consensus across this field, in a variety of western contexts, appears to indicate that these programs are effective (Harrison et al., 2020; Kim et al., 2016; Lösel & Schmucker, 2017; Olver, Marshall, et al., 2020; Olver, Nicholaichuk, et al., 2013; Schmucker & Lösel, 2015, 2017). Our findings fit comfortably within that consensus, and it appears that sexual offender treatment programs within the exclusively Canadian context have also been effective, at least through the 1990s to the early 2000s. Final affirmation (or refutation) of this conclusion await true experimental replication with the most contemporaneous clinical innovations (Levenson et al., 2020; Olff et al., 2025; Siglag, 2024). A reduction of funding of these specific programs within Canadian prisons appears to be out of sync with the body of this field's best, research-based evidence. Such evidence suggests that if longer prison sentences are to be implemented, these programs should also be considered for re-implementation, that is, for funding enough to ensure their ongoing "evidence-based effective management" within the Correctional Service of Canada (Lussier & McCuish, 2024; Nunes et al., 2007).

Limitations and Future Research Needs

Research teams in this field have, thus far, done a laudable job in producing strongly suggestive evidence about the potential for Canadian prison-based sexual offender treatment programs to prevent sexual and violent reoffences. Their inferences have been strengthened by uses of extant quasi-experimental comparison groups, valid archival outcomes, and relatively long follow-up periods. However, their inferences also seem tempered by such quasi-experimental designs, especially given their relatively small samples. Generally, such quasi-experiments or related, retrospective cohort designs cannot ensure the kind of confident control of potential confounds that one can expect to achieve through randomization. Specifically, their relatively small samples make it unlikely that they could possibly have powerfully controlled the host of potential confound explanations that may always be advanced with any such nonrandomized, comparative study.

It may be time for this field to consider randomized controlled trials (RCT), perhaps large, multi-prison RCTs. One benefit is that RCTs can produce much more confident knowledge with fewer study participants as they do not have to analytically control a host of covarying, potential confounds. In fact, we believe that such powerful and confidence-inspiring trials may be advanced quite efficiently in this field with as few as 100 participants per study group (Faul et al., 2007; Fleiss et al., 2003). Of course, this suggestion will naturally inspire an ethical debate, some suggesting that one cannot deny this “proven” intervention to any eligible participant, other, more conservative analysts and advocates, may suggest that without the use of randomization and some form of blinding such interventions remain “unproven.” They might even argue that it is unethical for a field not to eventually advance such very well controlled studies. One compromise solution would be to include waiting-list control groups in some such future research designs. Additionally, some may take issue with the lack of victim self-reports as a measure of recidivism currently within the field. Further research may need to consider other measures of recidivism to gain a larger, more equitable picture of the actual efficacy of these programs. These ethical debates notwithstanding, large, well-analytically controlled prospective cohort studies could also substantially bolster confidence in this field’s knowledge. Their downside is that they will be quite costly in terms of the necessary temporal and fiscal investments. We think that such a social investment would be well worth it as it promises large dividends in the alleviation and prevention of human suffering, among inmates themselves as well as among people residing in the communities they return to.

As with most rapid reviews, this one was limited by certain fiscal and temporal constraints. For example, this study began as a course-based project. Consequently, all PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) recommendations could not be followed (Kelly et al., 2016; Moher et al., 2009). Due to our limited resources, which included a lack of library science software, we could not readily integrate all of the steps of multiple independent reviewers searching for, coding, and analyzing the relevant primary studies. Consequently, we were only able to produce our final primary study search and retrieval step in a unified flowchart or PRISMA diagram. With much concomitant teaching and learning throughout the review process, we worked cooperatively. Furthermore, we were not blind to the primary studies’ findings. However, other steps in the review process, such as final study

selection and accomplishment of the meta-analysis were cross validated by two reviewers. Therefore, we believe that despite its rapid nature, our review's synthetic findings would likely be systematically replicated by a full systematic review. In fact, such a well-endowed, full systematic review, which updates this field's knowledge especially over the next five years as further, better controlled primary studies accrue, seems this field's necessary next synthetic step.

Conclusion

This field's best quasi-experimental evidence suggests institution-based sex offender treatment programs within Canadian prisons may prevent more than half of all sexual (and other criminal) offenses that might otherwise be perpetrated by such offenders released back into communities. A systematically replicating study using the most recent clinical methods and well as the most rigorous, randomized controlled methods is needed to affirm (or refute) this conclusion.

Acknowledgements

We thank Dr. Betty Barrett for her generous mentorship and scholarly guidance throughout the development of this study. We also thank the anonymous peer reviewers for thoughtful, constructive feedback that strengthened the framing and interpretation of this manuscript.

Disclosure Statement

No potential conflict of interest was reported by the author(s).

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^bPrimary studies (8) included in the rapid review sample selected from previous reviews.
^cAdditional primary studies (1) included in the rapid review sample selected from research literature databases (2020 to 2025).
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