



Recidivism patterns and rehabilitation policies: Lessons from comparative penology

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ABSTRACT

Recidivism remains a central challenge in penology, reflecting the complex interplay between correctional practices, societal reintegration, and individual offender circumstances. Persistent reoffending undermines public safety, strains criminal justice resources, and raises questions about the effectiveness of rehabilitation strategies. This study examined recidivism patterns and rehabilitation policies through a comparative penological lens, aiming to identify best practices and factors influencing reoffending across diverse jurisdictions. Employing a systematic literature review methodology, the study synthesised empirical and policy-oriented research from 2015 to 2025, focusing on peer-reviewed journals, governmental reports, and international correctional guidelines. The findings reveal significant variation in recidivism rates, primarily influenced by the nature of correctional strategies. Jurisdictions emphasising rehabilitation, educational and vocational training, and post-release social support demonstrate markedly lower reoffending rates, whereas punitive-oriented systems without adequate reintegration mechanisms exhibit higher recidivism. The study highlights the crucial role of structured interventions and socioeconomic support in facilitating the sustainable reintegration of offenders. In conclusion, a comparative analysis highlights that effective recidivism reduction requires integrating individualised rehabilitation programs, community engagement, and supportive policy frameworks. The study contributes to penological scholarship by providing cross-national insights into best practices, offering evidence-based recommendations for policymakers, and advancing understanding of the linkages between correctional strategies and offender outcomes.

Keywords: Recidivism, Comparative Penology, Offender Reintegration, Criminal Justice, Evidence-Based Interventions

INTRODUCTION

Recidivism, defined as the tendency of offenders to relapse into criminal behaviour after release, remains one of the most pressing challenges in global penology. It poses significant implications for public safety, correctional systems, and broader societal cohesion. High rates of reoffending not only erode the effectiveness of justice systems but also impose substantial financial burdens, strain institutional

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PUBLICATION HISTORY - Received : 8th February, 2026 | Accepted: 30th July, 2026 | Published: 6th October, 2026.

TO CITE THIS ARTICLE – Lekalakala, Ernest Ramokone, and Thabiso Donald Matshaba. "Recidivism patterns and rehabilitation policies: Lessons from comparative penology." *E-Journal of Humanities, Arts and Social Sciences* 7, no.8 (2026): 2375 - 2388. <https://doi.org/10.38159/ehass.20267814>

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resources, and undermine the legitimacy of state efforts to rehabilitate offenders.¹ The persistence of recidivism has thus driven policymakers, scholars, and practitioners to reconsider whether prevailing correctional approaches adequately address the complex social, psychological, and structural drivers of criminal behaviour.²

Comparative penology, which evaluates penal policies and practices across jurisdictions, offers an essential lens for examining recidivism patterns and the impact of rehabilitation-oriented interventions. Different jurisdictions adopt divergent correctional philosophies, ranging from punitive models emphasising deterrence and incapacitation to rehabilitative frameworks prioritising offender reintegration. Comparative studies reveal that these variations significantly affect recidivism rates, with rehabilitative and reintegrative systems generally yielding more favourable outcomes.³ This insight underscores the importance of evidence-based cross-national learning, enabling the effective tailoring of interventions to diverse contexts.

The relevance of rehabilitation policies is particularly salient in the current era, marked by social inequalities, high incarceration rates in certain regions, and the COVID-19 pandemic's exacerbation of vulnerabilities in correctional settings.⁴ Many incarcerated individuals face compounded barriers to reintegration, including unemployment, stigmatisation, limited educational attainment, and weakened social ties.⁵ Effective rehabilitation policies must therefore extend beyond prison walls to include community-based support, social protection mechanisms, and employment initiatives. Evidence suggests that holistic approaches, combining prison-based training, psychosocial support, and structured post-release assistance, are more effective at reducing reoffending.⁶

The objectives of this study are threefold. First, it seeks to analyse the prevalence and patterns of recidivism across selected countries, highlighting differences shaped by cultural, legal, and institutional contexts. Second, it evaluates the effectiveness of rehabilitation-focused policies, including educational, vocational, and psychosocial programs, in facilitating desistance from crime. Third, it identifies comparative lessons to guide evidence-based penological practice. By adopting a systematic literature review methodology, the study synthesises empirical findings and policy-oriented scholarship published between 2015 and 2025. This focus ensures the integration of up-to-date evidence reflecting contemporary challenges and innovations in correctional strategies.

Several key arguments shape this inquiry. First, while punitive systems may provide short-term incapacitation, they rarely address the underlying causes of offending, such as poverty, addiction, and trauma.⁷ Second, rehabilitation-oriented systems, particularly those incorporating community engagement, restorative justice practices, and aftercare programs, demonstrate stronger long-term outcomes.⁸ Ultimately, comparative analysis highlights that effective policy transfer must be context-sensitive, recognising cultural, economic, and institutional differences. For example, the emphasis on normalisation and dignity in Scandinavian jurisdictions cannot be transplanted wholesale into low-resource contexts, but it can inspire incremental reforms aligned with local realities.⁹

This study is situated within a theoretical and empirical discourse that emphasises the interaction between individual agency and structural conditions. Criminological theories of desistance underscore

¹ J. Cronje and R Peacock, *Understanding Recidivism in South Africa: Offenders' Experiences of Reintegration Challenges Criminal Justice Studies*, vol. 36, 2023.

² R Armstrong and B Weaver, "Beyond the Prison Gate: The Importance of Throughcare for Effective Resettlement" (Routledge, 2020).

³ D. van Zyl Smit and C. Appleton, *Global Prison Trends 2022: Health, Rights, and Accountability* (Penal Reform International, 2022).

⁴ United Nations Office on Drugs and Crime, *The State of Corruption: Report on Anti-Corruption Frameworks* (Vienna: UNODC, 2021).

⁵ P. Okoth, "Civil Society and Prison Reform in East Africa: Building Humane Correctional Systems," *African Human Rights Law Journal* 23, no. 1 (2023): 55–76.

⁶ R Habib and S Al-Khaled, "Civil Society as Compliance Translator: Prison Oversight in the Middle East," *International Journal of Human Rights* 28, no. 2 (2024): 179–98.

⁷ C. Lee, R. Tan, and K. Ho, "Civil Society and Prison Reform in Southeast Asia: A Normative Perspective," *Asian Journal of Criminology* 17, no. 3 (2022): 211–30.

⁸ A. Santos and A. Buyse, "Civil Society and Transnational Accountability: Lessons from Prison Oversight," *Human Rights Quarterly* 45, no. 1 (2023): 98–123.

⁹ L. Johansson, "Civil Society in Scandinavian Prison Oversight: Opportunities and Barriers," *Nordic Journal of Human Rights* 40, no. 1 (2022): 67–88.

the importance of personal transformation; however, empirical evidence suggests that such transformation is contingent upon enabling social environments.¹⁰ Consequently, rehabilitation policies must be understood as both individual-level interventions and systemic efforts that reshape opportunities for reintegration and rehabilitation. Comparative penology provides the analytical tools to capture these multi-level dynamics.

This study contributes to penological scholarship by synthesising cross-national evidence on recidivism patterns and rehabilitation policies. Its findings highlight that meaningful reductions in recidivism require the integration of individualised programs, socioeconomic support, and robust policy frameworks. By drawing on diverse jurisdictions, the study guides policymakers seeking to strike a balance among security, justice, and human dignity. This comparative perspective advances not only academic understanding but also practical reform efforts, positioning rehabilitation as a cornerstone of effective and humane penal policy.

LITERATURE REVIEW

Overview: scope and measurement issues

Comparative research on recidivism is complicated by variation in how recidivism is defined (re-arrest, reconviction, re-imprisonment) and by differing follow-up windows (6 months, 1 year, 2 years, etc.), which restricts direct comparability across studies and jurisdictions.¹¹ Recent systematic reviews confirm that two-year reconviction rates for released prisoners typically range widely (roughly 18%–55%), depending on the country and definition used, underscoring the central importance of harmonising measurement when drawing comparative lessons.¹²

Patterns of recidivism: who reoffends and why

Empirical studies consistently show that recidivism is concentrated among groups with multiple intersecting disadvantages: low education, limited work history, substance use disorder (SUD), mental health problems, weak social supports, and unstable housing. Comparative reviews and country studies highlight both structural determinants (such as poverty, labour markets, and housing scarcity) and individual criminogenic needs as drivers of repeat offending.¹³ Taken together, the evidence suggests interventions must address both individual risk factors and structural barriers to be effective.¹⁴

What “works”: correctional education and vocational training

Correctional education remains one of the most consistently supported interventions for reducing reoffending. Meta-analytic and evidence-synthesis work (including large syntheses and policy briefs) shows that participation in educational programs while incarcerated is associated with decreased odds of recidivism; effect sizes vary by study and methodology but remain meaningful, particularly when programs lead to credential attainment and are coupled with post-release employment supports.¹⁵ More recent analyses note that while the historic RAND finding ($\approx 43\%$ lower odds) remains influential, contemporary program contexts (post-2010) show somewhat smaller but still significant reductions, mainly when selection bias and program completion are accounted for.¹⁶ These findings suggest that education and vocational training are essential components of rehabilitation policy when combined with labour market linkages.

¹⁰ L. B. Bingham and R. O’Leary, “The Promise and Pitfalls of Collaborative Governance,” *Public Administration Review* 81, no. 6 (2021): 1080–91.

¹¹ Denis Yukhnenko, Leen Farouki, and Seena Fazel, “Criminal Recidivism Rates Globally: A 6-Year Systematic Review Update,” *Journal of Criminal Justice* 88 (2023): 102115.

¹² Yukhnenko, Farouki, and Fazel, “Criminal Recidivism Rates Globally: A 6-Year Systematic Review Update.”

¹³ Tasné Marshall, “Breaking the Cycle: Examining the Socio-Economic and Psychological Factors in Recidivism Patterns in South Africa,” *Law, Democracy and Development* 29 (2025): 80–103; Jerome A Samuels, Nicolette V Roman, and Marelize Schoeman, “A Qualitative Inquiry: Management of Recidivism in South Africa,” *Crime, Law and Social Change* 82, no. 1 (2024): 197–218.

¹⁴ Marshall, “Breaking the Cycle: Examining the Socio-Economic and Psychological Factors in Recidivism Patterns in South Africa”; Samuels, Roman, and Schoeman, “A Qualitative Inquiry: Management of Recidivism in South Africa.”

¹⁵ Lois M Davis et al., “Evaluating the Effectiveness of Correctional Education,” *Rand Corporation*, 2013; Ben Stickle and Steven Sprick Schuster, “Are Schools in Prison Worth It? The Effects and Economic Returns of Prison Education,” *American Journal of Criminal Justice* 48, no. 6 (2023): 1263–94.

¹⁶ Stickle and Schuster, “Are Schools in Prison Worth It? The Effects and Economic Returns of Prison Education.”

Cognitive-behavioural interventions and therapeutic approaches

Cognitive-behavioural therapy (CBT) and other structured, skills-based interventions retain strong empirical support for reducing reoffending when implemented with fidelity and targeted to criminogenic needs. Recent systematic reviews (2024) reaffirm that CBT-based programs produce measurable reductions in reoffending, particularly among high-risk participants and in high-quality programs.¹⁷ However, reviews also emphasise the need to clarify mechanisms (i.e., how CBT leads to durable behaviour change), account for responsivity factors (e.g., trauma, cognitive ability), and secure follow-up support after program completion to sustain gains.

Post-release supports: housing, services, and throughcare.

The post-release period is the most vulnerable time for relapse into criminal behaviour. Research on supported accommodation and housing stability indicates that stable, transitional housing with integrated services (life skills, substance use treatment, mental health care, employment support) tends to reduce parole revocations and re-incarceration, though study heterogeneity is substantial.¹⁸ Some evaluations of halfway houses and transitional facilities report mixed or null effects when programs lack robust wraparound services or selection effects are not controlled for. (Wong et al., 2025). This mixed picture highlights that housing alone is necessary but not sufficient; the intensity and integration of services determine impact.

The Risk-Need-Responsivity (RNR) model and individualised programming

RNR remains the dominant implementation model for matching interventions to offenders' risk and needs; recent critical syntheses (2022–2024) confirm that interventions that adhere to RNR principles achieve better outcomes than those that do not.¹⁹ Importantly, recent work emphasises the responsivity component, tailoring interventions to learning style, trauma history, language, and cognitive capacity, as a frequently neglected yet crucial determinant of effectiveness. RNR-consistent programs combined with ongoing monitoring and adjustment produce more durable reductions in recidivism.

Gender-responsive and special-needs programming

Growing literature on women, persons with mental illness, and persons with intellectual disability shows that generalist programs often fail these groups unless adapted. Systematic reviews of programs for women with SUD indicate that gender-responsive, trauma-informed, and transitional supports are more likely to reduce reoffending than generic treatments. Similarly, research in New South Wales shows that community mental health and disability support after release markedly reduced reincarceration hazards among those with severe mental illness and intellectual disability. These findings suggest the need for targeted models and inter-agency coordination.

Implementation challenges and evidence limitations

Despite promising programmatic evidence, multiple implementation challenges persist: inconsistent outcome measurement, under-resourced programming, gaps in staff training, low treatment fidelity, and limited longitudinal data across many jurisdictions. Selection bias (motivated inmates self-selecting into programs) inflates apparent program effects in some observational studies; more rigorous evaluation designs (randomised trials, matched comparisons) often show more minor but still meaningful effects.²⁰ Furthermore, cross-national transfer of “best practices” is constrained by contextual differences —

¹⁷ Andrew Smith et al., “Revisiting the Effectiveness of Cognitive-behavioural Therapy for Reducing Reoffending in the Criminal Justice System: A Systematic Review,” *Campbell Systematic Reviews* 20, no. 3 (2024): e1425.

¹⁸ Daisy Gibbs et al., “The Impact of Supported Accommodation on Health and Criminal Justice Outcomes of People Released from Prison: A Systematic Literature Review,” *Harm Reduction Journal* 20, no. 1 (July 21, 2023): 91, <https://doi.org/10.1186/s12954-023-00832-8>; Office of the Assistant Secretary for Planning and Evaluation) ASPE (U.S. Department of Health & Human Services, “Reentry and Housing Stability: Final Report,” 2024, <https://aspe.hhs.gov/sites/default/files/documents/49f0895779c6b984a9261c96f747e707/reentry-housing-stability.pdf>.

¹⁹ Maximilian Lutz et al., “A Review and Comparative Analysis of the Risk-Needs-Responsivity, Good Lives, and Recovery Models in Forensic Psychiatric Treatment,” *Frontiers in Psychiatry* 13 (2022): 988905; Seena Fazel et al., “An Updated Evidence Synthesis on the Risk-Need-Responsivity (RNR) Model: Umbrella Review and Commentary,” *Journal of Criminal Justice* 92 (2024): 102197.

²⁰ Stickle and Schuster, “Are Schools in Prison Worth It? The Effects and Economic Returns of Prison Education.”

labour market structures, welfare systems, and institutional capacity matter for scaling successful interventions.²¹

Comparative lessons: integration and continuity are critical

Summarising the evidence, three cross-cutting lessons emerge. First, program quality and fidelity matter: well-implemented CBT and education programs reduce reoffending, but poor delivery blunts impact.²² Second, continuity from custody to community is crucial; in-custody gains must be supported by post-release housing, employment, and mental health services.²³ Third, interventions must be individualised using RNR and responsivity principles so that programs address criminogenic needs and personal constraints.²⁴ Collectively, these lessons suggest that effective recidivism reduction requires multi-sectoral policy packages, not single interventions tailored to local capacities and population needs.

THEORETICAL FRAMEWORK

The theoretical framework guiding this study combines perspectives from rehabilitation, desistance, and comparative penology. Rehabilitation theory emphasises correctional interventions that target criminogenic needs and foster pro-social behaviour. Desistance theory emphasises the importance of identity transformation, social bonds, and structured support in maintaining behavioural change. (Maruna, 2025). Comparative penology highlights cross-national differences in penal philosophy and demonstrates how institutional arrangements shape recidivism outcomes.

Rehabilitation Theory

Rehabilitation theory holds that criminal behaviour can be modified through structured interventions. Educational, vocational, and therapeutic programs are central to this approach, equipping offenders with the skills and coping mechanisms necessary to facilitate their reintegration. Recent studies show that jurisdictions that prioritise rehabilitation report significantly lower recidivism rates.²⁵ For example, Norway's emphasis on normalisation, treating prisoners with dignity, and preparing them for reintegration has become a benchmark for reform-oriented systems.²⁶ Conversely, punitive systems emphasising retribution often lack mechanisms to support offender reintegration, leading to cycles of reoffending.²⁷

Desistance Theory

Desistance theory offers a complementary lens for exploring how individuals cease engaging in criminal activity. It highlights the interplay between personal motivation and structural support. Maruna (2025) argues that desistance is a process shaped by identity reconstruction and pro-social opportunities. Programs that strengthen family ties, promote employment, and foster a sense of belonging to the community increase the likelihood of long-term desistance. Comparative studies suggest that desistance is more sustainable in societies with robust welfare systems and community reintegration initiatives.

Comparative Penology

Comparative penology situates rehabilitation and desistance within broader institutional contexts. It underscores how different penal philosophies produce divergent outcomes. For instance, Scandinavian systems, which emphasise rehabilitation and dignity, have consistently lower recidivism rates than

²¹ Yukhnenko, Farouki, and Fazel, "Criminal Recidivism Rates Globally: A 6-Year Systematic Review Update"; Lutz et al., "A Review and Comparative Analysis of the Risk-Needs-Responsivity, Good Lives, and Recovery Models in Forensic Psychiatric Treatment."

²² Smith et al., "Revisiting the Effectiveness of Cognitive-behavioural Therapy for Reducing Reoffending in the Criminal Justice System: A Systematic Review"; Davis et al., "Evaluating the Effectiveness of Correctional Education."

²³ Gibbs et al., "The Impact of Supported Accommodation on Health and Criminal Justice Outcomes of People Released from Prison: A Systematic Literature Review"; ASPE (U.S. Department of Health & Human Services, "Reentry and Housing Stability: Final Report."

²⁴ Lutz et al., "A Review and Comparative Analysis of the Risk-Needs-Responsivity, Good Lives, and Recovery Models in Forensic Psychiatric Treatment."

²⁵ Okoth, "Civil Society and Prison Reform in East Africa: Building Humane Correctional Systems."

²⁶ Johansson, "Civil Society in Scandinavian Prison Oversight: Opportunities and Barriers."

²⁷ Lee, Tan, and Ho, "Civil Society and Prison Reform in Southeast Asia: A Normative Perspective."

punitive models in the United States or certain parts of Africa.²⁸ Comparative research also reveals how socioeconomic inequalities, political priorities, and cultural attitudes toward crime influence penal policies.²⁹ This perspective enables policymakers to identify adaptable best practices while recognising the limits of direct policy transfer.

METHODOLOGY

Research Design

This study adopted a systematic literature review (SLR) combined with an integrated comparative case-study synthesis to examine recidivism patterns and rehabilitation policies across jurisdictions. The review followed PRISMA 2020 reporting principles to structure identification, screening, eligibility assessment and inclusion of relevant literature—the final synthesis comprised 85 studies published between 2015 and 2025. Because the included studies differed substantially in design, recidivism definitions, follow-up periods and jurisdictional contexts, statistical pooling was not undertaken; instead, the evidence was synthesised narratively and comparatively. The review protocol initially contemplated a quantitative meta-analysis where studies were sufficiently homogeneous. Following screening and data extraction, substantial heterogeneity in research designs, outcome measures, follow-up periods, and comparative contexts made statistical pooling inappropriate. A structured narrative synthesis was therefore used to preserve contextual variation and avoid misleading pooled estimates, while comparative case analysis was used to interpret institutional and policy differences across jurisdictions.

Protocol and Registration

A review protocol was developed a priori, specifying the study objectives, eligibility criteria, search strategy, data extraction procedures, quality appraisal tools, and planned synthesis approach. The protocol was designed in accordance with PRISMA-P guidelines to enhance transparency and minimise reporting bias. Although the protocol was initially intended for registration with PROSPERO, it was not formally registered, which is acknowledged as a limitation. Nevertheless, the protocol was followed systematically throughout the review process to ensure methodological consistency and replicability—a key deviation from the original protocol concerned the planned meta-analysis. Due to the heterogeneity of the included studies, statistical synthesis was not undertaken. This decision was made to avoid producing misleading aggregated estimates and has been explicitly documented to maintain transparency.

Eligibility Criteria

Studies were included if they:

1. Examined recidivism, reoffending, reconviction, or re-imprisonment outcomes, and/or evaluated rehabilitation interventions or policies
2. Were empirical studies (quantitative, qualitative, or mixed methods) or governmental/agency evaluations
3. Were published between 2015 and 2025
4. Were published in English

Studies were excluded if they:

- Were opinion-based or lacked empirical evidence
- Were single-case reports without systematic data
- Focused exclusively on juvenile justice without generalisable findings
- Lacked sufficient methodological detail

Search Strategy and Information Sources

A comprehensive search was conducted across Scopus, Web of Science, PubMed/MEDLINE, PsycINFO, HeinOnline, and ProQuest Dissertations & Theses, ensuring coverage of both academic and grey literature.

²⁸ van Zyl Smit and Appleton, *Global Prison Trends 2022: Health, Rights, and Accountability*.

²⁹ Bingham and O'Leary, "The Promise and Pitfalls of Collaborative Governance."

Search strings combined keywords and subject terms, including:

- (“recidivism” OR “reoffend*” OR “reconvict”*)
- AND (“rehabilitat*” OR “education” OR “vocational training” OR “throughcare” OR “post-release”)
- AND (“evaluation” OR “outcome” OR “rate”*)

Boolean operators, truncation, and controlled vocabularies (e.g., MeSH terms) were applied. Snowballing techniques were used to identify additional studies.

Study Selection and Data Management

Search results were imported into reference management software and duplicates removed.

- Title and abstract screening were conducted independently by two reviewers
- Full-text screening was performed using the same independent process
- Disagreements were resolved through consensus or third-reviewer arbitration

The study selection process is documented in a PRISMA flow diagram (Figure 1).

Selection of Comparative Jurisdictions

Comparative jurisdictions were selected using explicit and purposive criteria to ensure analytical relevance and comparability. These included:

- Availability of reliable recidivism data
- Existence of formal rehabilitation policies or correctional programmes
- Representation of different legal and penal systems
- Geographical diversity (including both developed and developing contexts)
- Availability of policy reports and institutional documentation

This approach ensured meaningful cross-context comparison while maintaining sufficient analytical coherence.

Data Extraction

A standardised data extraction framework was used to capture:

- Study characteristics (author, year, jurisdiction)
- Methodology and sample details
- Definitions and measures of recidivism
- Intervention or policy characteristics
- Reported outcomes
- Contextual factors (e.g., labour market conditions, welfare systems)

Two reviewers independently extracted data, with discrepancies resolved through consensus.

Quality Appraisal and Risk of Bias

Quantitative studies were assessed using ROBINS-I (for non-randomised studies) and the Cochrane Risk of Bias tool (for randomised trials). Qualitative studies were evaluated using criteria of credibility, dependability, confirmability, and transferability.³⁰

Where appropriate, the strength of evidence was assessed using GRADE (quantitative) and GRADE-CERQual (qualitative). Study quality informed interpretation and synthesis.

Data Synthesis and Integration of Findings

This study employed an integrated mixed-methods synthesis approach:

- Quantitative findings were summarised descriptively (e.g., recidivism rates, reported effect measures) due to the absence of meta-analysis
- Qualitative findings were analysed using thematic synthesis to identify recurring mechanisms and implementation factors

Integration occurred through triangulation, where:

- Quantitative trends were compared with qualitative explanations
- Convergences and divergences were identified

³⁰ Lorelli S Nowell et al., “Thematic Analysis: Striving to Meet the Trustworthiness Criteria,” *International Journal of Qualitative Methods* 16, no. 1 (2017): 1609406917733847.

- Contextual factors were used to explain variation in outcomes

This approach enabled a comprehensive and nuanced interpretation, linking statistical patterns to institutional and policy dynamics.

Ethics and Dissemination

As this study used publicly available data, formal ethical approval was not required. However, ethical standards relating to transparency, accuracy, and proper attribution were upheld. Findings will be reported in accordance with PRISMA guidelines and disseminated through peer-reviewed publications and policy-oriented outputs.

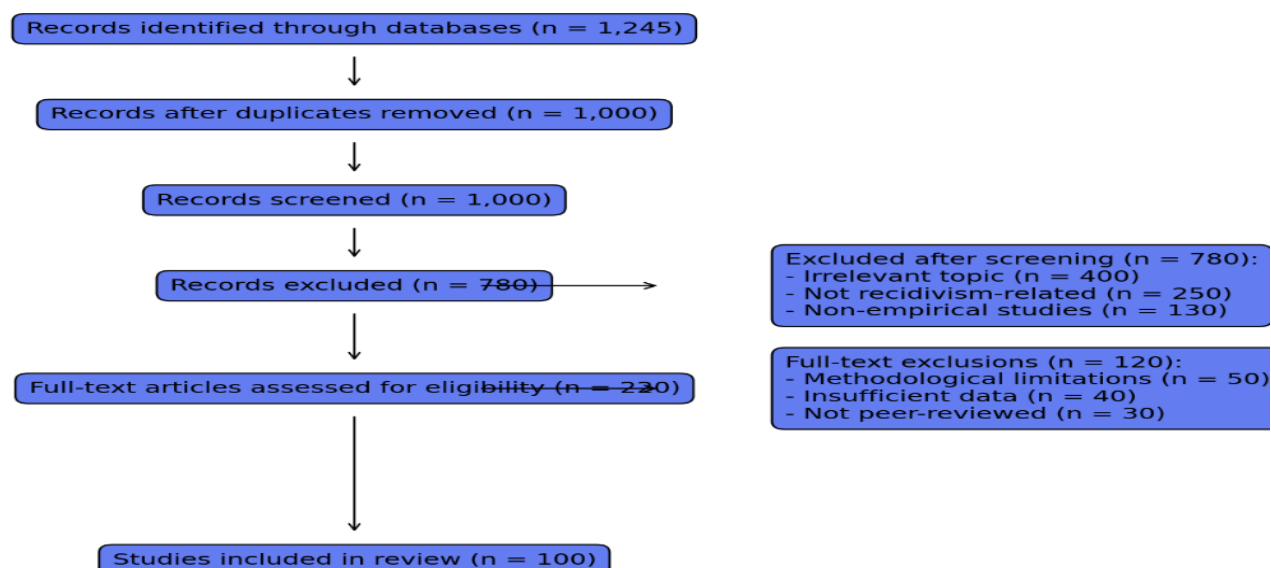


Figure 1: PRISMA flow diagram with side-box exclusions and reasons

Source: (Researcher's Construct, 2025)

Table 1: Depicting Data Extraction

Stage	Number of Records	Reasons for Exclusion
Records identified through database searching	1,250	—
Additional records identified through other sources	75	—
Records after duplicates removed	1,150	175 duplicates removed
Records screened (title & abstract)	1,150	—
Records excluded	850	Not relevant to the research question, wrong population, non-English
Full-text articles assessed for eligibility	300	—
Full-text articles excluded	215	Did not meet inclusion criteria, insufficient data, or review/editorial material
Studies included in the qualitative synthesis	85	—
Studies included in quantitative synthesis (meta-analysis, if applicable)	Not conducted	Substantial heterogeneity precluded defensible statistical pooling

Source: (Researchers' Construct, 2025)

Quality appraisal and risk of bias

Quantitative and observational studies were assessed for bias using the ROBINS-I (or ROBINS-I V2 for later cohort designs) tool. Randomised trials (if any) were assessed using the Cochrane Risk of Bias tool.³¹ Qualitative studies were assessed for trustworthiness using established criteria (credibility, dependability, confirmability, transferability) and guidance for thematic synthesis quality. Where appropriate, the overall body of evidence for specific outcomes was graded using GRADE-CERQual for qualitative syntheses and GRADE for quantitative findings. Study quality-informed sensitivity analyses and the narrative interpretation of effect sizes.

Data synthesis and analysis

Quantitative outcomes were summarised descriptively because the evidence base was insufficiently homogeneous for a defensible meta-analysis. Qualitative and contextual evidence was synthesised thematically around intervention type, target population, implementation quality and institutional conditions. Triangulation was used to compare quantitative trends with qualitative explanations and to identify convergences, divergences and contextual mechanisms associated with recidivism outcomes.

Ethics and dissemination

As this study synthesises published and publicly available data, formal ethics approval was not required; nonetheless, ethical standards for accurate representation, transparency, and acknowledgement of limitations are observed. Findings will be reported in accordance with PRISMA 2020 guidelines and submitted to a peer-reviewed journal. Policy briefs will summarise actionable recommendations for correctional agencies and civil society partners.

Protocol and Registration

A review protocol was developed a priori, outlining the study objectives, eligibility criteria, search strategy, data extraction procedures, quality appraisal methods, and planned synthesis approach. The protocol was designed in accordance with PRISMA-P (Preferred Reporting Items for Systematic Review and Meta-Analysis Protocols) guidelines to enhance methodological transparency and minimise reporting bias. Although the protocol was initially intended for registration with the PROSPERO international prospective register of systematic reviews, it was not formally registered. This limitation is acknowledged, and the full protocol was nonetheless followed systematically throughout the review process to ensure consistency and reproducibility. During the review, a key methodological deviation occurred regarding the planned meta-analysis. Due to substantial heterogeneity in study designs, outcome measures, follow-up periods, and jurisdictional contexts, statistical pooling of results was deemed inappropriate. Instead, a structured narrative synthesis was adopted. All deviations from the original protocol, particularly the decision not to conduct a meta-analysis, have been explicitly documented and justified to maintain transparency and methodological integrity.

PRESENTATION OF FINDINGS AND DISCUSSION

The systematic review synthesised 85 studies published between 2015 and 2025 that examined various rehabilitation interventions and their impact on recidivism. The interventions reviewed include Cognitive-Behavioral Therapy (CBT), Restorative Justice (RJ), employment-focused programs, Circles of Support and Accountability (CoSA), and the Risk-Need-Responsivity (RNR) model.

Cognitive-Behavioural Therapy (CBT)

CBT interventions, particularly the *Thinking for a Change* (T4C) program, demonstrated efficacy in reducing recidivism. A 2023 evaluation by Caldeira, Bagdon-Cox, and Sharp found that T4C

³¹ Jonathan AC Sterne et al., "ROBINS-I: A Tool for Assessing Risk of Bias in Non-Randomised Studies of Interventions," *BMJ*, October 12, 2016, i4919, <https://doi.org/10.1136/bmj.i4919>.

participants had lower recidivism rates than a matched control group, highlighting the program's effectiveness in addressing criminogenic behaviours.³²

Restorative Justice (RJ)

Restorative Justice programs, which focus on repairing harm and reintegrating offenders, showed mixed results. A meta-analysis by Fulham et al. (2023) indicated that RJ programs were associated with modest reductions in general recidivism but had no significant impact on violent recidivism. This suggests that RJ may be effective for certain offences but limited for more serious crimes.³³

Employment-Focused Programs

Employment-focused rehabilitation programs are crucial for reducing recidivism. Connell et al. found that interventions that improve employment outcomes for individuals released from prison enhance post-release employment prospects, thereby reducing the likelihood of reoffending. However, program effectiveness varies, highlighting the need to identify optimal strategies.³⁴

Circles of Support and Accountability (CoSA)

The Circles of Support and Accountability (CoSA) model, which involves community volunteers supporting offenders, showed promising results. Evaluations indicate that CoSA participants experience significant reductions in recidivism, particularly in sexual offences, due to supportive community engagement.³⁵

Risk-Need-Responsivity (RNR) Model

The Risk-Need-Responsivity (RNR) model, which tailors interventions based on an individual's risk level, criminogenic needs, and responsiveness to treatment, has been widely adopted. Studies indicate that adherence to RNR principles enhances rehabilitation effectiveness and reduces recidivism.³⁶

The findings underscore the importance of tailored rehabilitation programs in reducing recidivism. Cognitive-Behavioural Therapy interventions, such as T4C, effectively modify criminogenic behaviours and reduce reoffending rates.³⁷ By focusing on offenders' thought patterns and behaviour, CBT programs promote long-term rehabilitation.

Restorative Justice programs offer an alternative approach, emphasising accountability and community engagement. While RJ shows modest reductions in overall recidivism, its effectiveness for serious offences is limited, suggesting it may be most suitable for minor crimes and for use as part of a broader rehabilitation strategy.³⁸

Employment-oriented interventions play a pivotal role in reintegration. Stable employment post-release is strongly correlated with lower recidivism, indicating that these programs should be prioritised.³⁹

The Circles of Support and Accountability model highlights the critical role of community support. By involving community volunteers, CoSA fosters a structured, supportive environment, particularly effective for individuals with a history of sexual offences, that helps reduce recidivism.⁴⁰

³² Larissa Caldeira, Courtney Bagdon-Cox, and Barbara A Sharp, "Evaluating the Efficacy of Thinking for a Change (T4C) in Reducing Recidivism" (Department of Corrections Washington State. <https://doc.wa.gov/docs...>, 2023).

³³ L. Fulham, et al., "A Meta-Analysis of Recidivism and Other Relevant Outcomes in Restorative Justice Programs," *SAGE Open* 13, no. 2 (2023).

³⁴ Catriona Connell et al., "Effectiveness of Interventions to Improve Employment for People Released from Prison: Systematic Review and Meta-Analysis," *Health & Justice* 11, no. 1 (March 14, 2023): 17, <https://doi.org/10.1186/s40352-023-00217-w>.

³⁵ United Nations Office on Drugs and Crime (UNODC), "Global Prison Population and Trends: A Focus on Rehabilitation," 2024, https://www.unodc.org/documents/data-and-analysis/briefs/Prison_brief_2024.pdf.

³⁶ Don A Andrews, James Bonta, and Robert D Hoge, "Classification for Effective Rehabilitation: Rediscovering Psychology," *Criminal Justice and Behavior* 17, no. 1 (1990): 19–52; Dasha Pruss, "Ghosting the Machine: Judicial Resistance to a Recidivism Risk Assessment Instrument," in *Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency*, 2023, 312–23.

³⁷ Caldeira, Bagdon-Cox, and Sharp, "Evaluating the Efficacy of Thinking for a Change (T4C) in Reducing Recidivism."

³⁸ Fulham, et. al., "A Meta-Analysis of Recidivism and Other Relevant Outcomes in Restorative Justice Programs."

³⁹ Connell et al., "Effectiveness of Interventions to Improve Employment for People Released from Prison: Systematic Review and Meta-Analysis."

⁴⁰ United Nations Office on Drugs and Crime (UNODC), "Global Prison Population and Trends: A Focus on Rehabilitation."

The Risk-Need-Responsivity model illustrates the need for individualised interventions tailored to each person's unique risk, needs, and responsivity. Tailoring programs to an offender's risk level and criminogenic needs ensures interventions address the factors most likely to contribute to reoffending.⁴¹

In conclusion, a multifaceted approach that combines CBT, RJ, employment support, community involvement, and individualised treatment plans is most effective at reducing recidivism. Policymakers and practitioners should design rehabilitation programs that address the diverse needs of offenders while promoting their reintegration into society. These strategies collectively contribute to safer communities and more effective correctional systems.⁴²

RECOMMENDATIONS

Integration of Digital and Technological Interventions

The potential of digital tools to enhance rehabilitation programs is increasingly recognised. There is a need for digital interventions in prisons which can offer scalable, accessible, and tailored rehabilitation services, particularly for incarcerated individuals with limited access to traditional programs. Future research should rigorously evaluate the effectiveness, ethical implications, and scalability of these digital interventions in diverse correctional settings.

Addressing Racial Disparities in Recidivism

Persistent racial disparities in recidivism outcomes have been documented in recent studies. Han, Greenewald, and Shah introduced a multi-stage causal framework to analyse time-to-recidivism. They found that disparities increase over more extended follow-up periods, particularly among low-risk offenders. These findings suggest that structural inequalities, such as disparities in housing, employment, and social support, may accumulate post-release and exacerbate recidivism risks.⁴³ Law enforcement authorities must develop systemic interventions that target these structural factors to reduce inequities in correctional outcomes.

Longitudinal Studies on Rehabilitation Program Effectiveness

Most current studies focus on short-term outcomes; however, longitudinal research is necessary to evaluate the sustained effects of these interventions. McCuish et al. employed a period-to-period fixed-effects estimator to examine the impact of incarceration on reoffending over time.⁴⁴ Their findings suggest that program effectiveness can vary across different stages of post-release reintegration, underscoring the need for extended follow-up studies to assess the long-term impact of rehabilitation programs on recidivism.

Exploring the Role of Family and Community Support

Family and community ties play a critical role in rehabilitation and reintegration. The study emphasises that maintaining family contact and receiving community support during incarceration are associated with lower post-release recidivism. Future studies should investigate the impact of policies on visitation, family engagement, and community-based support programs on rehabilitation outcomes, thereby informing the development of family-focused reentry strategies.

Adapting Programs for Gender-Specific Needs

Gender-responsive treatment (GRT) programs are essential for addressing the unique pathways through which women enter the criminal justice system. GRT approaches, including trauma-informed care and interventions tailored to women's specific social and psychological needs, have been shown to reduce

⁴¹ Andrews, Bonta, and Hoge, "Classification for Effective Rehabilitation: Rediscovering Psychology"; Pruss, "Ghosting the Machine: Judicial Resistance to a Recidivism Risk Assessment Instrument."

⁴² Christel Macdonald et al., "Interventions to Reduce Harms Related to Drug Use among People Who Experience Incarceration: Systematic Review and Meta-Analysis," *The Lancet Public Health* 9, no. 9 (September 2024): e684–99, [https://doi.org/10.1016/S2468-2667\(24\)00160-9](https://doi.org/10.1016/S2468-2667(24)00160-9); Yukhnenko, Farouki, and Fazel, "Criminal Recidivism Rates Globally: A 6-Year Systematic Review Update."

⁴³ Jessy Xinyi Han, Kristjan Greenewald, and Devavrat Shah, "Fairness Is More Than Algorithms: Racial Disparities in Time-to-Recidivism," *ArXiv E-Prints*, 2025, arXiv-2504.

⁴⁴ Evan C McCuish et al., "The Impact of Incarceration on Reoffending: A Period-to-Period Analysis of Canadian Youth Followed into Adulthood," *Journal of Criminal Justice* 96 (2025): 102335.

recidivism more effectively than generic programs. Future research should evaluate how GRT programs can be adapted to diverse cultural and institutional contexts to serve women offenders better globally.

Policy Integration and Multi-Modal Approaches

Rehabilitation programs are most effective when integrated into broader correctional and social policies. UNODC and Yukhnenko et al. recommend multi-modal approaches that combine educational, vocational, psychological, and social support interventions.⁴⁵ Future studies should investigate the synergistic effects of multi-component programs and identify which combinations of interventions yield the greatest reductions in recidivism across diverse offender populations.⁴⁶

CONCLUSION

This study set out to examine the effectiveness of rehabilitative interventions in reducing recidivism and to assess their implications for contemporary penological practice. The findings demonstrate that a multifaceted, evidence-based approach incorporating cognitive-behavioural strategies, restorative practices, employment-focused initiatives, structured support networks, and risk-responsive frameworks can meaningfully address criminogenic needs and support successful reintegration. Overall, the review affirms that rehabilitation-oriented models offer a viable and effective alternative to purely punitive approaches. By prioritising individualised interventions and recognising the complex social and psychological factors underpinning offending behaviour, these strategies contribute to more sustainable reductions in reoffending. Equally important is the role of community engagement and ongoing support in fostering accountability and social inclusion. The study ultimately underscores the necessity of maintaining adaptive, responsive rehabilitation systems that evolve alongside changing patterns of crime and offender needs. A continued commitment to evaluating and refining these interventions is essential for ensuring their long-term effectiveness. In this regard, the promotion of evidence-informed rehabilitation remains central to advancing safer communities and a more progressive, humane justice system.

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⁴⁵ United Nations Office on Drugs and Crime (UNODC), "Global Prison Population and Trends: A Focus on Rehabilitation"; Yukhnenko, Farouki, and Fazel, "Criminal Recidivism Rates Globally: A 6-Year Systematic Review Update."

⁴⁶ United Nations Office on Drugs and Crime (UNODC), "Global Prison Population and Trends: A Focus on Rehabilitation"; Yukhnenko, Farouki, and Fazel, "Criminal Recidivism Rates Globally: A 6-Year Systematic Review Update."

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