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Postsecondary Education Programs Among Incarcerated and Formerly Incarcerated Adults: A Systematic Review of Recidivism and Reentry Outcomes

Felix Ohemeng Akomeah
Indiana University of Pennsylvania, USA

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ABSTRACT: High rates of reoffending mean that release from prison often marks the beginning of a renewed cycle of incarceration rather than a permanent transition to community life. Although evidence on the role of postsecondary education in reducing recidivism has grown substantially since the year 2000, existing reviews paid limited attention to the mechanisms through which education may influence desistance. This systematic review synthesizes empirical research examining the relationship between postsecondary education programs and recidivism among incarcerated and formerly incarcerated adults. Following PRISMA 2020 guidelines, the review searched various databases to obtain fifteen studies. These sources that met the inclusion criteria were synthesized narratively. Overall, the evidence suggests that participation in postsecondary education is associated with lower rates of recidivism. However, the strength of this relationship diminished as methodological rigor increased. The most consistent benefits were observed among individuals engaged in college-level education and those who completed a credential rather than merely enrolled in a program. Despite its effects, postsecondary education remains one of the few correctional interventions that continues to receive support under rigorous evaluation. As access to educational opportunities expands, policymakers and practitioners should invest in program designs that address selection bias and other methodological challenges.

KEYWORDS: Correctional Education, Recidivism, Incarcerated Adults, Criminal Justice, Prison Education

1.0 INTRODUCTION

Mass incarceration remains one of the most persistent and costly challenges in criminal justice. In the United States, the prison population grew dramatically over the four decades preceding the 2020s, producing a correctional system that absorbs hundreds of billions of dollars annually (Bozick et al., 2018). High reoffending rates increase the scale of this problem because release from prison frequently marks the beginning of a revolving cycle rather than a genuine exit from the system. Reducing recidivism remains an important public safety objective (Pinamang, 2026b). That cycle represents failures of community-based interventions, rehabilitation, and the individual (Pinamang, 2026a).

The Higher Education Act of 1965 made incarcerated individuals eligible for federal student aid, and through the 1970s and 1980s, prison college programs expanded across state systems (Davis et al., 2014). That expansion was reversed sharply. The Violent Crime Control and Law Enforcement Act of 1994 stripped incarcerated individuals of Pell Grant eligibility, and within a year, participation in postsecondary correctional education programs fell by 44 percent (Davis et al., 2014). The proportion of state prison facilities offering college courses declined from 30 percent in 1995 to 26 percent in 2000, and inmate participation in college programs dropped from 14 percent in 1991 to 7 percent in 2004 (Davis et al., 2014). The 2007 Second Chance Act and, later, the 2016 Second Chance Pell Pilot Program signaled a partial reversal of that policy direction, reopening federal funding to select prison education providers (Denney & Tynes, 2021). Access to education remains a significant challenge for many incarcerated and formerly incarcerated learners (Adjei et al., 2026).

The early influential review by Lipton, Martinson, and Wilks (1975), which examined 231 correctional programs, concluded that prison rehabilitation largely does not work. That finding shaped policy for decades, but subsequent research challenged it. Bozick et al. (2018), analyzing 37 years of research across 57 recidivism studies, found that inmates in correctional education programs were 28 percent less likely to recidivate than those who received no such programming.

Despite this growing body of evidence, an important question remains unresolved since most prior reviews pool diverse program types such as basic literacy, GED preparation, vocational training, and degree-level college education into single effect estimates, making it difficult to determine which specific program types produce the strongest outcomes. In particular, the specific contribution of postsecondary education remains unclear. The value of correctional education is also increasingly linked to post-release employment outcomes (Kumi et al., 2026). This review synthesises empirical evidence on the impact of postsecondary education programs on recidivism among formerly incarcerated adults. The review addresses a practice gap, as the synthesis provides correctional administrators and program developers with a structured account of what the evidence currently supports and where implementation priorities are most defensible.

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2.0 METHODS

2.1 Review Design

This study is a systematic review conducted in accordance with the Preferred Reporting Items for Systematic Reviews and Meta-Analyses 2020 (PRISMA 2020) guidelines. The primary analytic strategy is narrative synthesis, with findings organised thematically around the main research question.

2.2 Eligibility Criteria

Studies were screened and selected using predefined eligibility criteria based on the review's PICOS framework. Publication type, language, and publication period were also applied as criteria.

Table 1: Study Eligibility Criteria

Parameter	Included studies	Excluded studies
Population	Examined incarcerated or formerly incarcerated adults aged 18 years and above	Focused exclusively on juvenile offenders under 18, or on non-incarcerated populations
Intervention	Evaluated a formal postsecondary education program delivered within or linked to a correctional facility (vocational training, certificate programs, associate degrees, bachelor degrees, or college-in-prison programs)	Examined only primary or secondary education with no postsecondary component, or informal and non-formal learning
Comparator	Included a comparison group of incarcerated or formerly incarcerated adults who received no postsecondary education program and standard correctional programming only	Had no identifiable comparison group or baseline
Outcome	Reported at least one quantitative measure of recidivism: re-arrest, reconviction, reincarceration, or time to reoffence	Reported no recidivism-related outcome
Study design	Used a randomised controlled trial, quasi-experimental, longitudinal cohort, or mixed-methods design with empirical recidivism data, or were systematic reviews or meta-analyses synthesising such studies	Were opinion pieces, editorials, commentaries, or narrative reviews without primary or synthesised empirical data
Publication type	Were peer-reviewed journal articles, government reports, or institutional research reports	Fell outside these publication categories
Language	Were published in English	Were non-English without a verified full translation
Publication period	Were published between 2009 and 2025	Were published before 2009

2.3 Search Sources and Strategy

Searches were conducted across three electronic databases: Scopus, ERIC, and Google Scholar, which were used as a supplementary source to identify grey literature not indexed in the primary databases. Search terms were structured around three concept clusters. The first covered population terms: *incarcerated, prisoner, offender, ex-offender, formerly incarcerated*. The second covered intervention terms: *postsecondary education, college-in-prison, vocational training, certificate program, degree program, correctional education*. The third covered outcome terms: *recidivism, reincarceration, reoffending, re-arrest, and reconviction*. Boolean operators were applied with AND between clusters and OR within clusters. The search period was restricted to 2009 to 2025. The search was conducted in January 2026.

Table 2: Database Search Strings

Database (fields searched)	Search string
Scopus (title, abstract, keywords)	("incarcerated" OR "prisoner" OR "offender" OR "ex-offender" OR "formerly incarcerated") AND ("postsecondary education" OR "college-in-prison" OR "vocational training" OR "certificate program" OR "degree program" OR "correctional education") AND ("recidivism" OR "reincarceration" OR "reoffending" OR "re-arrest" OR "reconviction")
Web of Science (Topic: title, abstract, keywords)	("incarcerated" OR "prisoner" OR "offender" OR "ex-offender" OR "formerly incarcerated") AND ("postsecondary education" OR "college-in-prison" OR "vocational training" OR "certificate program" OR "degree program" OR "correctional education") AND ("recidivism" OR "reincarceration" OR "reoffending" OR "re-arrest" OR "reconviction"))
Google Scholar (grey literature; Boolean nesting limited, so run as targeted combinations of one term per cluster, screened to saturation)	Example combinations: "correctional education" "recidivism" prisoner; "postsecondary education" "reincarceration" incarcerated; "college-in-prison" "reoffending" offender; "vocational training" "re-arrest" "formerly incarcerated"

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2.4 Screening and Study Selection

Records identified across all databases were deduplicated. Screening proceeded in four stages. Stage 1 removed duplicate records. Stage 2 applied title screening against the eligibility criteria. Stage 3 involved abstract screening of all records that passed title review. Stage 4 involved full-text review of all records that passed abstract screening. Two reviewers independently screened records at each stage, with disagreements resolved through discussion and consensus. 19 studies were included in the final synthesis.

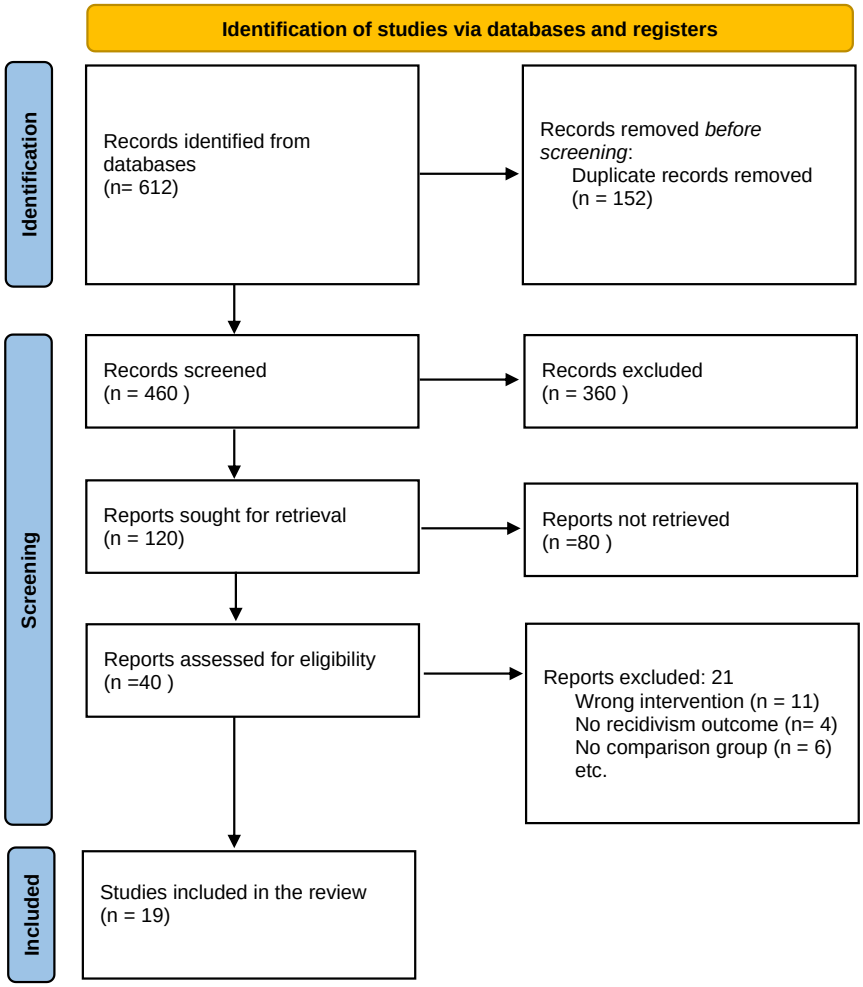


Figure 1: PRISMA 2020 flow diagram

2.5 Data Extraction

Data were extracted from each included study using a standardized extraction form. The following information was recorded for each study: author(s) and year; country; journal or report series; study design; sample size; comparison group; follow-up period; program type (vocational, certificate, degree); delivery mode; recidivism measure used; direction and magnitude of effect; and any moderating or mediating variables reported. The full extraction table is presented below:

Table 3: Summary of Extracted Study Data

ID	Author (Year)	Theoretical framework / stated rationale	Covariates or matching variables controlled	Effect size / key statistic (with CI where reported)	Direction	Author-stated limitations
S1	Bozick et al. (2018)	Human capital and rehabilitation rationale; participation reduces reoffending via skills and structured time	Effect sizes stratified by Maryland SMS rating; aggregated across study-reported metrics	Odds of recidivism 28% lower among participants in highest-caliber designs (odds-ratio metric)	Reduction	Variation in metrics across primary studies required aggregation; many primary studies cannot rule out selection bias

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S2	Cale et al. (2019)	Risk-Needs-Responsivity; employment as a buffer against reoffending	Risk level (LSI-R), education, Indigenous status, age at release	VET completion odds ratio 2.07 (95% CI 1.04, 3.04) for remaining custody-free; education OR 2.13	Reduction	Risk assessment availability varied across jurisdictions; "return to custody" defined inconsistently across states
S3	Davis et al. (2013)	Correctional education effectiveness; rehabilitation rationale	Studies rated and weighted by Maryland SMS level; baseline-balance coding attempted where studies reported it	Odds of recidivating 43% lower among participants in most rigorous studies	Reduction	Could not disentangle effects of different program types; few studies reported sufficient information for consistent coding; unable to obtain all unpublished grey literature, and 16 of 267 primary studies could not be located
S4	Davis et al. (2014)	Comprehensive evaluation of correctional education for incarcerated adults and juveniles	Builds on 2013 SMS-rated dataset	Education for adults reduced reincarceration by 13 percentage points; five dollars saved on reincarceration costs per dollar invested	Reduction	Juvenile effectiveness evidence limited because all incarcerated youth receive education, leaving no untreated comparison; juvenile evidence base too small for meta-analysis
S5	Denney & Tynes (2021)	Instrumental theory of recidivism; college-in-prison as causal intervention	Prior education, prior felony convictions, age at release, sex, conviction-type recidivism summary; vocational participation and GED status	Recidivism 12.0% (participants) vs 23.3% (non-selected applicants); OLS and Lin estimators	Reduction	Design relies on assumption that interview evaluation does not predict recidivism independently; cannot fully approximate random assignment
S6	Duwe & Clark (2014)	Education-to-employment-to-desistance pathway (human capital)	Propensity score matching on 22 theoretically relevant covariates from the COMS database	Postsecondary degree associated with less recidivism; secondary degree no significant recidivism effect	Mixed	Recidivism data captured only Minnesota arrests, convictions, and incarcerations, likely underestimating true rates; PSM addresses observable but not unobserved bias and works best with large samples
S7	Ellison et al. (2017)	Rapid evidence assessment of prison education effectiveness	28 papers met inclusion; 18 reoffending studies meta-analysed	Pooled odds ratio indicated reduced likelihood of recidivism across 18 reoffending studies	Reduction	Limited number of high-quality studies; heterogeneity across included evidence
S8	Giles (2016)	Human capital; education reducing recidivism and welfare dependence	Regression modelling on WA prisoner education and welfare dataset (14,643 prisoners)	More units of study completed associated with lower re-incarceration	Reduction	Re-incarceration before July 2005 or after June 2010 not observable; some classes could not be credibly assessed
S9	Kim & Clark (2013)	Self-selection bias correction; college education and desistance	49 variables in propensity model; fixed-effects logistic and Cox regression	Three-year recidivism 9.4% (completers) vs 17.1% (matched comparison)	Reduction	Female sample very small; PSM addresses observable but not unobservable selection
S10	Lockwood et al. (2012)	Education and employment as determinants of reentry success	Logistic regression including race; education level and employment status	College-educated recidivism 31.0% vs higher rate among those with education below college	Reduction	Non-experimental design lacked a matched comparison group; did not control for prior criminal history

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S11	McNeeley (2023)	Desistance and selection-bias correction; RNR and continuum-of-care	Propensity score matching; LSCMI, education/employment domain, release type	No significant difference in recidivism or employment after matching	No effect	Under-the-table work not captured; program dosage and proficiency not measured
S12	Newton et al. (2018)	Systematic review of rigorous VET and employment evaluations	Inclusion limited to experimental and quasi-experimental designs (12 studies)	Mixed results; programs most effective for high-risk participants when targeted	Mixed	Few methodologically rigorous evaluations available; search construction may have missed studies
S13	Nur & Nguyen (2023)	Moving beyond monolithic effect sizes to moderators of program success	Multilevel model; moderators coded around four themes (31 studies, 97 effect sizes)	Effectiveness ambiguous; moderators affect conclusions	Mixed	Incomparable outcomes; treatment heterogeneity; program stacking; conflicting program definitions
S14	Pompoco et al. (2017)	Criminogenic need and structured-time rationale (RNR-aligned)	Propensity score matching within four subgroups: CASAS reading score, prior terms, age, and misconduct	GED completion 6.1% fewer prison returns; college 5.6%; vocational 4.2%; participation without completion	Reduction	Could not determine length of supervised release; first-year misconduct an imperfect covariate
S15	Stickle & Sprick Schuster (2023)	Cost-benefit and human capital: economic returns on education investment	Effect sizes weighted by SMS; random-effects (DerSimonian-Laird); covariate-adjusted estimates	College participation 41.5% lower odds of recidivism; 16.5% reduction among SMS 4-5 studies	Reduction	Some evidence of publication bias in the recidivism sample (funnel plot); annual cost per student may underestimate multi-year costs
S16	Winterfield et al. (2009)	Human capital; education-to-employment pathway for reentry	Multi-site evaluation across Indiana, Massachusetts, and New Mexico; administrative-record analysis with propensity-score weighting and inmate focus groups	Students anticipated employment gains from study, yet only about one in five reported work arranged at release; many judged in-prison study insufficient for career goals	Mixed	Short one-year window; small site samples; qualitative findings self-reported; weighting addresses observed factors only
S17	Sokoloff & Schenck-Fontaine (2017)	Collateral-consequences and reentry-barriers lens, with gendered analysis	Narrative literature review of college-in-prison and college-upon-reentry research, with attention to women and prison-to-community hybrid programmes	Collateral consequences of a conviction restrict college access on reentry; transition supports coordinate housing, employment, and family reunification	Not applicable (review)	Little primary research on collateral consequences for college access
S18	Quach et al. (2022)	Critical analysis of postsecondary attainment and labour-market integration under community supervision	Critical analysis reviewing research on justice-impacted students, drawing on California model programmes	Formerly incarcerated people face high labour-market barriers and low-wage, insecure work; a criminal record reduces employment opportunity by roughly half even for degree-holders; community	Not applicable (critical analysis)	Limited research on labour-market outcomes for degree-holders

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				supervision constrains enrolment		
S19	Donaldson et al. (2021)	Barriers-and-supports framework for postsecondary continuation after release	Literature-review white paper on barriers and supports for formerly incarcerated college students	Collateral consequences, record disclosure, and "Ban the Box" shape college and employment access; peer mentorship and correctional-education programmes aid persistence; women face distinct barriers	Not applicable (review)	Limited description of search; evidence concentrated in United States settings

2.6 Quality Appraisal

Included studies were assessed for methodological quality using the Critical Appraisal Skills Programme (CASP) checklists and the Scale for the Assessment of Narrative Review Articles (SANRA). CASP was selected because the included studies span multiple designs, and the tool provides separate checklists matched each design type, and SANRA because the included studies also contain narrative reviews. No study was excluded from the review solely based on its quality rating. Quality appraisal scores were used to contextualize findings during synthesis, with lower-quality studies interpreted more cautiously.

Table 4.1 CASP Systematic Review Checklist

Appraisal used the CASP Systematic Review checklist for the seven reviews and meta-analyses (CASP, 2024). Items: SR1 Clearly focused question; SR2 Appropriate inclusion criteria; SR3 Adequate and comprehensive search; SR4 Quality of included studies assessed; SR5 Reasonable to combine results; SR6 Precision of results reported; SR7 Applicable to the population of interest; SR8 All-important outcomes considered.

Study	SR1	SR2	SR3	SR4	SR5	SR6	SR7	SR8	Summary
Bozick et al. (2018)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Partial	High
Davis et al. (2013)	Yes	Yes	Partial	Yes	Yes	Yes	Yes	Yes	High
Davis et al. (2014)	Yes	Yes	Partial	Yes	Partial	Yes	Yes	Yes	High
Ellison et al. (2017)	Yes	Yes	Partial	Yes	Yes	Yes	Partial	Yes	Moderate
Newton et al. (2018)	Yes	Yes	Partial	Yes	Partial	Partial	Partial	Yes	Moderate
Nur & Nguyen (2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High
Stickle & Sprick Schuster (2023)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	High

Table 4.2. CASP Cohort Study Checklist

Appraisal used the CASP Cohort Study checklist for the eight primary studies (CASP, 2024). Items: C1 Clearly focused issue; C2 Cohort recruited acceptably; C3 Exposure accurately measured; C4 Outcome accurately measured; C5 Confounders identified and addressed; C6 Follow-up complete and long enough; C7 Precision of results reported; C8 Results applicable and believable.

Study	C1	C2	C3	C4	C5	C6	C7	C8	Summary
Cale et al. (2019)	Yes	Yes	Yes	Partial	Yes	Yes	Yes	Partial	Moderate
Denney & Tynes (2021)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Partial	High
Duwe & Clark (2014)	Yes	Yes	Yes	Partial	Yes	Yes	Yes	Partial	High
Giles (2016)	Yes	Yes	Yes	Partial	Partial	Partial	Partial	Partial	Moderate
Kim & Clark (2013)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Partial	High
Lockwood et al. (2012)	Yes	Yes	Yes	Yes	Partial	Yes	Partial	Partial	Low
McNeeley (2023)	Yes	Yes	Yes	Yes	Yes	Partial	Yes	Partial	High
Pompoco et al. (2017)	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Partial	High
Winterfield et al. (2009)	Yes	Partial	Yes	Yes	Partial	Partial	Partial	Partial	Moderate

High = all or nearly all items rated Yes, with no core internal validity item (exposure measurement, outcome measurement, confounding control, or comparability) rated below Yes.

Moderate = one or more Partial ratings on search, synthesis, outcome measurement, or applicability, with core internal validity otherwise intact.

Low = a core internal validity item rated Partial or No, such as absence of a matched comparison group or failure to control for major confounders.

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Table 4.3 SANRA Checklist

Appraisal used the SANRA checklist for the three narrative reviews. Each scored 0–2. Items: N1 Justification of the article's importance for the readership; N2 Statement of concrete aims or questions; N3 Description of the literature search; N4 Referencing; N5 Scientific reasoning; N6 Appropriate presentation of the collected evidence. Item scores are summed to a total out of 12.

Study	N1	N2	N3	N4	N5	N6	Total (/12)
Sokoloff & Schenck-Fontaine (2017)	2	2	0	2	2	1	9
Donaldson et al. (2021)	2	2	1	2	2	1	10
Quach et al. (2022)	2	2	0	2	2	1	9

2.7 Data Synthesis

Given the heterogeneity of study designs, program types, populations, and recidivism measures across included studies, a narrative synthesis was the primary method of analysis. Findings were organised thematically around the main research question. Where studies reported comparable quantitative effects, these are described in relation to one another to identify patterns. No statistical pooling was conducted.

3.0 RESULTS

3.1 Characteristics of Included Studies

Table 5. Characteristics of Included Studies

Author (Year)	Country	Study Design	Program Type	Sample Size	Comparison Group	Recidivism Measure	Follow-up	Key Finding
Bozick et al. (2018)	USA	Meta-analysis (random-effects)	Academic and vocational correctional education	57 recidivism studies	Non-participants	Various (return to prison, re-arrest)	Varied by study	Participants in highest-rigor studies were 28% less likely to recidivate
Cale et al. (2019)	Australia	Cross-jurisdictional cohort (logistic regression)	Vocational education and training	10,834 prisoners	Non-VET participants	Return to custody	2 and 5 years	VET associated with remaining custody-free at 2 and 5 years; for males, moderated by risk level
Davis et al. (2013)	USA	Meta-analysis (Maryland SMS)	Academic and vocational correctional education	58 studies (50 with recidivism)	Non-participants	Various	Varied by study	Odds of recidivating 43% lower in highest-rigor studies; significant reduction overall
Davis et al. (2014)	USA	Systematic review and meta-analysis	Correctional education (adult and juvenile)	Builds on 2013 dataset	Non-participants	Various	Varied by study	Confirms association between participation and lower recidivism; juvenile evidence base too small for meta-analysis
Denney & Tynes (2021)	USA (New York)	Design-based quasi-experimental (admissions-based)	College, liberal arts (Bard Prison Initiative)	1,439 (324 participants, 1,115 non-participants)	Applicants not selected for participation	Return to prison	3+ years	Large, significant reduction in recidivism (12.0% for participants vs 23.3% for applicants); consistent across racial groups; higher participation

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								linked to lower recidivism
Duwe & Clark (2014)	USA (Minnesota)	Quasi-experimental (propensity score matching)	Secondary (GED/HS) and postsecondary degrees	9,394 released 2007–2008	Matched non-degree earners	Reconviction	Through 2010	Postsecondary degree associated with less recidivism; secondary degree had no significant recidivism effect
Ellison et al. (2017)	UK (with US studies)	Rapid evidence assessment (systematic review)	Prison education (academic and vocational)	28 studies in total	Non-participants	Reoffending and employment	Varied by study	Education associated with reduced reoffending; overall evidence rated mixed to promising
Giles (2016)	Australia (Western Australia)	Longitudinal cohort (regression modelling)	Prison education (study in prison)	14,643 prisoners	Non-participants	Re-incarceration	2005–2010	Study in prison associated with reduced recidivism and reduced welfare dependence; more units completed linked to lower re-incarceration
Kim & Clark (2013)	USA (New York)	Quasi-experimental (propensity score matching)	College education	680 (340 completers, 340 matched comparison)	Matched comparison holding HSD/HSE	Re-arrest	3 years	Recidivism 9.4% for college completers vs 17.1% for matched comparison; college education reduced recidivism at a less inflated level than weaker designs
Lockwood et al. (2012)	USA (Indiana)	Longitudinal cohort (logistic regression, non-experimental)	Correctional education	6,561 offenders	Less-educated offenders	Reincarceration	5 years (2005–2009)	Education and postrelease employment associated with reduced recidivism
McNeeley (2023)	USA (Minnesota)	Quasi-experimental (propensity score matching)	Vocational education (postsecondary certificates)	928 completers; matched analytic sample 706 vs 6,005	Matched non-participants	Re-arrest, reconviction, reincarceration, revocation	1 to 3 years	No significant difference in recidivism or employment after matching
Newton et al. (2018)	International (Australian authors)	Systematic review (experimental and quasi-experimental)	Vocational education and training	12 studies (search 2000 to March 2015)	Non-participants	Recidivism and employment	Varied by study	Mixed evidence; programs most effective for high-risk participants when properly targeted
Nur & Nguyen (2023)	USA	Systematic review and meta-analysis (multilevel)	Prison work and vocational programs	31 program evaluations (1986–2017)	Non-participants	Recidivism, employment, misconduct	Varied by study	Effectiveness ambiguous; moderators matter; cautions against single pooled effect sizes

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Pompoco et al. (2017)	USA (Ohio)	Quasi-experimental (propensity score matching)	GED, vocational, college	92,217 inmates	Matched non-participants	Return to prison	2 to 3 years	Completion of GED, college, or vocational programs reduced return to prison; participation without completion showed no effect
Stickle & Sprick Schuster (2023)	USA	Meta-analysis	ABE, secondary, vocational, college	152 estimates from 79 papers	Non-participants	Recidivism, employment, wages	Varied by study	Prison education reduced recidivism; largest effects for vocational and college programs
Winterfield et al. (2009)	USA (IN, MA, NM)	Multi-site evaluation (administrative data and focus groups; propensity-score weighting)	Postsecondary correctional education	Three-state administrative samples plus focus groups across sites	Non-PSE participants	Employment expectation and preparedness; self-esteem; future orientation	~1 year	Primary evidence on perceived employment and psychosocial reentry effects of PSE
Sokoloff & Schenck-Fontaine (2017)	USA	Narrative literature review	College in prison and upon reentry; women; hybrid programmes	Selected studies and programme cases	None	College access on reentry; degree completion; transition support	N/A	Frames collateral consequences and prison-to-community continuity
Quach et al. (2022)	USA (California)	Critical analysis	Postsecondary attainment and the labour market under supervision	Cited research and California model programmes	With- versus without-degree comparison (from cited research)	Post-release employment; labour-market returns; enrolment under supervision	N/A	Evidence that a record limits employment even with a degree
Donaldson et al. (2021)	USA	Literature-review white paper	Barriers and supports to PSE for formerly incarcerated students	Reviewed literature; CUNY / John Jay programme context	None	College persistence; record disclosure; reentry demands; mentorship	N/A	Maps barriers and supports to post-release postsecondary continuation

3.2 Thematic Findings

Three themes were derived from the review's research question: the impact of postsecondary education on recidivism of formerly incarcerated individuals; differences in that relationship across program types; and the factors that moderate or mediate it.

3.2.1 Impact of Postsecondary Education on Recidivism of Formerly Incarcerated Individuals

Most of the evidence pointed toward an inverse association between participation in postsecondary education and recidivism. Among studies with the strongest research designs, participants were 28% less likely to recidivate than non-participants (Bozick et al., 2018). The odds of recidivating were 43% lower among participants in the most rigorous quasi-experimental studies pooled in an earlier synthesis (Davis et al., 2013). The follow-on evaluation confirmed the same association between participation and lower recidivism (Davis et al., 2014). When the evidence was restricted to studies rated 4 or 5 on the Maryland Scientific Methods Scale, prison education was associated with a 16.5% reduction in the odds of recidivism, and the causal estimate since 2010 settled at an 11% reduction (Stickle & Sprick Schuster, 2023).

The single-program studies moved in the same direction. Recidivism reached 12.0% among participants in the Bard Prison Initiative, against 23.3% among applicants who were not selected (Denney & Tynes, 2021). The three-year recidivism rate was 9.4% among college completers, compared with 17.1% among a propensity-matched comparison group (Kim & Clark, 2013). Education combined with postrelease employment was associated with reduced reincarceration over a five-year window (Lockwood et al., 2012). A dose-response pattern was also visible, in that completing more units of study in prison was associated with a lower rate of re-incarceration and reduced welfare dependence (Giles, 2016).

The evidence was not uniform, and several studies reported weaker or null associations once selection bias was addressed. No significant difference in recidivism appeared between vocational completers and a matched comparison group after adjustment (McNeeley, 2023). Results across

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vocational and employment programs were mixed in a synthesis limited to experimental and quasi-experimental designs (Newton et al., 2018). Conclusions about effectiveness were ambiguous across prison work and vocational evaluations (Nur & Nguyen, 2023). The overall body of prison-education evidence was rated mixed to promising rather than settled (Ellison et al., 2017).

3.2.2 Differential Effects by Program Type

The strength of the association varied by program type wherever studies distinguished between types. The largest reductions in recidivism were concentrated in vocational and college programs, with college producing the strongest single-type effect (Stickle & Sprick Schuster, 2023). Participation in a college program was associated with a 41.5% reduction in the odds of recidivism, the widest gap observed across program categories (Stickle & Sprick Schuster, 2023). Expressed in absolute terms, the estimated reductions in recidivism were 2.9 percentage points for adult basic education, 3.3 for secondary education, 4.17 for vocational education, and 12.74 for college (Stickle & Sprick Schuster, 2023).

The economic estimates tracked these differences. Each form of education yielded a positive return, with vocational education returning the most per dollar spent at $3.05, while college carried the highest per-student benefit at $16,908, equivalent to $6,441 net of its cost (Stickle & Sprick Schuster, 2023). The return on investment differed across types, reaching 205% for vocational education and 124% for secondary education, with college lower at 61% because of its higher per-participant cost of roughly $10,467 (Stickle & Sprick Schuster, 2023).

Completion-level evidence from a single large system showed the same ordering, though with smaller gaps. Completing a GED was associated with 6.1% fewer prison returns within three years, compared with 5.6% for college class completers and 4.2% for those who completed vocational training and apprenticeships (Pompoco et al., 2017). The distinction between degree levels was sharper where secondary and postsecondary credentials were separated, as earning a postsecondary degree was associated with reduced recidivism while earning a secondary degree showed no significant recidivism effect (Duwe & Clark, 2014). College-level programming carried the strongest association among the educational types examined in that system (Duwe & Clark, 2014).

College findings were consistent across the studies that isolated them. Recidivism was lower among college completers than among matched non-completers (Kim & Clark, 2013). The same impact was found when college participants were compared with non-selected applicants (Denney & Tynes, 2021). Vocational findings were more divided. Participation in vocational education and training was associated with remaining custody-free at both two and five years (Cale et al., 2019). No significant recidivism difference emerged for vocational certificate holders once matching was applied (McNeeley, 2023). Across a synthesis of experimental and quasi-experimental designs, vocational training produced mixed results (Newton et al., 2018). Where program types were pooled, completion of GED, college, or vocational programs was associated with a lower return-to-prison rate (Pompoco et al., 2017).

3.2.3 Moderating and Mediating Factors

Program completion recurred as a moderator across the included studies. Completion was associated with reduced return to prison, while participation that stopped short of completion showed no comparable association (Pompoco et al., 2017). Recidivism reductions were similarly tied to degree completion rather than to enrolment alone (Duwe & Clark, 2014).

Risk level operated as a moderator, though the evidence pointed in opposing directions. The effect of vocational education and training on remaining custody-free was moderated by risk level for male prisoners, with low-risk males benefiting most (Cale et al., 2019). Programs were instead reported as most effective for high-risk participants where services were properly targeted (Newton et al., 2018).

Methodological rigor shaped the size of the observed effects. Effect sizes varied across levels of study quality within the pooled evidence (Bozick et al., 2018). Estimates differed by both methodological rigor and program type (Davis et al., 2013). The association attenuated as design quality increased, narrowing to a 16.5% reduction in the odds of recidivism among the highest-rated studies (Stickle & Sprick Schuster, 2023).

Employment appeared as a recurring pathway between education and reduced reoffending. Earning a post-secondary degree was associated with more hours worked, higher overall wages, and less recidivism within the same population (Duwe & Clark, 2014). Education, together with post-release employment, was associated with reduced reincarceration (Lockwood et al., 2012). The estimated employment gains scaled with program type, rising by 0.54 percentage points for secondary education, 2.48 for vocational education, and 4.68 for college (Stickle & Sprick Schuster, 2023).

Program-level features also conditioned measured success. Treatment heterogeneity, conflicting program definitions, and program stacking affected whether evaluations concluded that programs worked (Nur & Nguyen, 2023).

3.2.4 Reentry Outcomes

Employment was a major concern for formerly incarcerated individuals, many of whom viewed education as a pathway to stable work after release (Quach et al., 2022). In practice, however, many continued to experience low-paid and insecure employment, and criminal records further constrained access to better opportunities, including for those with college credentials (Quach et al., 2022). These outcomes suggest a mismatch between expectations of education and its actual labour market returns, with some participants also perceiving prison education as insufficient for achieving long-term career goals (Winterfield et al., 2009).

For others, reentry created opportunities to continue education beyond prison. Community college partnerships enabled some individuals to transition into higher education after release, often with the support of Pell Grants (Sokoloff & Schenck-Fontaine, 2017). This pathway contributed to the attainment of associate and bachelor's degrees among formerly incarcerated students (Sokoloff & Schenck-Fontaine, 2017). However, continuation in education was shaped by practical constraints during reentry, including housing instability, employment pressures, and the need for mentoring support (Donaldson et al., 2021). At the same time, supervision requirements could limit participation in study, while women often faced additional pressures related to caregiving and family responsibilities that affected their ability to remain in education (Quach et al., 2022; Donaldson et al., 2021).

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4.0 DISCUSSION

The central question of this review was whether postsecondary education reduces recidivism among incarcerated and formerly incarcerated adults. Overall, the evidence suggests that it does. However, the size of the observed effect depends considerably on the methodological quality of the studies, particularly the extent to which they account for differences between individuals who choose to participate in educational programs and those who do not.

This pattern was evident across the literature. Meta-analyses reported substantial reductions in recidivism among participants, including estimates of 28% (Bozick et al., 2018) and 43% (Davis et al., 2013). However, Stickle and Sprick Schuster (2023) found that when the analysis was restricted to the most rigorous studies, the reduction in the odds of recidivism decreased to 16.5%. Similarly, McNeeley (2023) reported no significant difference in recidivism between vocational certificate holders and a matched comparison group. Taken together, these findings suggest that some of the larger effects reported in earlier studies may reflect differences between participants and non-participants rather than the impact of education alone. Although the estimated effect becomes smaller in more rigorous studies, it generally remains positive.

This issue is important because individuals who enroll in postsecondary education while incarcerated are often different from those who do not participate. They may be more motivated, possess higher levels of prior educational attainment, or present a lower risk of reoffending. If these differences are not adequately controlled, educational programs may appear more effective than they actually are. For this reason, the strongest evidence comes from studies that use methods designed to reduce selection bias.

Several studies employing such methods continued to find positive outcomes. Denney and Tynes (2021) used an admissions-based design that compared participants with applicants who were not selected, reported recidivism rates of 12.0% among participants, and 23.3% among non-participants. Similarly, Kim and Clark (2013) found rates of 9.4% and 17.1%, respectively, using propensity-score matching. These findings suggest that the relationship between postsecondary education and reduced recidivism is unlikely to be explained entirely by selection effects. At the same time, the null findings reported by McNeeley (2023) indicate that positive outcomes cannot be assumed across all educational programs and settings. The evidence therefore supports a cautious conclusion: postsecondary education appears to reduce recidivism, but the magnitude of its effect is smaller and more context-dependent than some earlier estimates suggest.

The impact of correctional education was not consistent across program types. Postsecondary education generally produces the largest and most consistent reductions in recidivism. For example, Stickle and Sprick Schuster (2023) estimated that participation in college programs was associated with a 41.5% reduction in the odds of recidivism and an absolute reduction of 12.74 percentage points. In contrast, findings for vocational education were mixed. Cale et al. (2019) reported lower rates of return to custody among participants, whereas McNeeley (2023) found that these effects disappeared after applying matching techniques to account for differences between participants and non-participants.

Although the evidence appears to favor postsecondary education, this conclusion should be interpreted cautiously. Individuals who enroll in college programs may differ from other incarcerated individuals in important ways, such as their motivation and commitment to education. As a result, it is difficult to determine whether the stronger outcomes are due to the programs themselves or to the characteristics of those who participate in them. Therefore, the current evidence does not support a definitive conclusion that college programs are inherently more effective than other forms of correctional education.

Stronger evidence emerged regarding program completion. Several studies found that positive outcomes were concentrated among individuals who completed their programs. Pompoco et al. (2017) reported that participation without completion was associated with little benefit, while Duwe and Clark (2014) found that reductions in recidivism were linked to earning a degree rather than simply enrolling in a program. Because completion can be measured directly and has shown consistent associations with improved outcomes across studies, it may be a more reliable indicator of success than program type alone. These findings suggest that supporting students through to credential completion may be as important as expanding access to educational opportunities.

The evidence concerning the mechanisms through which education reduces recidivism was less clear. Employment is often proposed as the main pathway linking education to successful reentry. Some studies support this explanation. Duwe and Clark (2014) found that earning a postsecondary degree was associated with higher wages, more hours worked, and lower recidivism, while Lockwood et al. (2012) reported that educational participation and post-release employment were both associated with lower rates of reincarceration. However, education did not always translate into stable employment after release, as many still experienced low-paid and insecure work, and criminal records continued to limit access to better jobs even for those with college credentials (Quach et al., 2022). Other findings also raise questions about whether employment fully explains the relationship. Bozick et al. (2018) reported a 28% reduction in recidivism among education participants but found no corresponding improvement in employment outcomes. This suggests that education may reduce reoffending through additional pathways beyond employment alone. While employment remains a plausible explanation, the current evidence is insufficient to conclude that it is the primary mechanism through which correctional education influences recidivism.

Several limitations cut across the studies and temper any firm conclusion. The evidence is concentrated in the United States, with only a few cohort studies from Australia (Giles, 2016) and a review centered on the United Kingdom (Ellison et al., 2017), so confidence drops sharply once the question moves outside the context of developed countries. Because almost the entire set rests on quasi-experimental designs, residual selection bias cannot be ruled out anywhere. It can only be reduced.

Overall, the evidence suggests that prison education is associated with lower rates of recidivism, although the strength of this relationship depends on the quality of the research. The most consistent evidence supports college-level education and degree completion as particularly beneficial moderating and mediating factors. However, while several studies propose explanations for why education reduces reoffending, these mechanisms have not been conclusively demonstrated. The strongest argument for prison education is not that it guarantees large reductions in recidivism, but that its positive association with reduced reoffending remains evident even in studies using more rigorous research methods. This level of evidence compares favourably with that available for many other correctional interventions.

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4.2 Limitations of the Review

This review used narrative synthesis rather than meta-analysis, because the included studies varied too much in program definitions, recidivism measures, and follow-up windows to support statistical pooling. The trade-off is that the review cannot offer a single pooled effect size, and its conclusions rest on the pattern across studies rather than on a precise combined estimate. Also, the evidence is concentrated in the United States, with only a small number of studies from Australia and the United Kingdom, so the findings may not transfer to correctional systems in other regions or income settings. Finally, quality appraisal using the CASP checklists involves reviewer judgement, and inter-rater reliability statistics are not reported here. The possibility of publication bias also remains, since studies reporting significant reductions are more likely to be published than those reporting null effects. Despite these limitations, the review was guided by a transparent protocol, a systematic search strategy, and a structured quality appraisal process. These methodological strengths allow the limitations to be considered openly when interpreting the findings.

4.3 Future Research Directions and Recommendations

First, studies should distinguish between program participation and program completion, as the evidence suggests that positive outcomes are more strongly associated with earning a credential than with enrollment alone. Future research should also examine differences across educational levels and program types to determine whether some forms of postsecondary education are more effective than others. In addition, the mechanisms linking education to reduced recidivism require further investigation. Although employment is frequently proposed as the primary pathway, some studies have reported reductions in recidivism without corresponding improvements in employment outcomes. More research is therefore needed to identify and test the factors through which education may influence reentry success.

The findings also have important implications for policy and practice. Under the reinstated Second Chance Pell framework, policymakers may achieve stronger outcomes by investing in access to postsecondary education as well as in the support services necessary for students to complete their programs. Given the consistent association between postsecondary education and lower recidivism rates, continued investment in college-level programming appears justified. However, program evaluations should account for differences between participants and non-participants to ensure that outcomes are not overstated due to selection effects. Greater consistency in outcome measurement and reporting across correctional education programs would also strengthen the evidence base and support more informed policy decisions in the future.

5.0 CONCLUSION

Overall, the evidence suggests that participation in postsecondary education is associated with lower rates of recidivism. However, the magnitude of this association depends on the methodological quality of the studies. Studies that more effectively controlled selection bias generally reported smaller effects than less rigorous studies. Despite this, the relationship between postsecondary education and reduced recidivism remained evident. The findings of the review suggest that efforts to improve educational attainment and credential completion may be particularly important for maximizing the benefits of correctional education. It calls for continued investment in correctional postsecondary education, while also highlighting the importance of rigorous program evaluation and support for credential completion. Although the effects are more modest than some early studies suggested, the association between postsecondary education and reduced recidivism remains sufficiently consistent to justify its inclusion as part of broader reentry and rehabilitation strategies.

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