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# **The Use and Impact of Correctional Programming for Inmates on Pre- and Post-Release Outcomes**

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Grant Duwe, Ph.D.  
Minnesota Department of Corrections

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**U.S. Department of Justice  
Office of Justice Programs  
810 Seventh St. N.W.  
Washington, DC 20531**

**Howard Spivak**

Acting Director, National Institute of Justice

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# The Use and Impact of Correctional Programming for Inmates on Pre- and Post-Release Outcomes

## Introduction

State and federal prisons have long provided programming to inmates during their confinement. Institutional programming encompasses a broad array of services and interventions, including substance abuse treatment, educational programming, and sex offender treatment. The objective of providing prisoners with programming is to improve their behavior, both before and after release from prison. Indeed, institutional programming is often intended to not only enhance public safety by lowering recidivism, but also to promote greater safety within prisons by reducing misconduct. Although U.S. correctional systems typically offer some programming opportunities within prisons, research suggests many prisoners do not participate in programming while incarcerated (Lynch & Sabol, 2001).

This paper reviews the available evidence on the impact of institutional programming on pre- and post-release outcomes for prisoners. Given the wide variety of institutional interventions provided to inmates in state and federal prisons, this paper focuses on programming that: (1) is known to be provided to prisoners, (2) has been evaluated, and (3) addresses the main criminogenic needs, or dynamic risk factors, that existing research has identified. This paper, therefore, examines the empirical evidence on educational programming, employment programming, cognitive behavioral therapy (CBT), chemical dependency (CD) and sex offender treatment, social support programming, mental health interventions, domestic violence programming, and prisoner re-entry programs. In addition to reviewing the evidence on the effects of these interventions on pre- and post-release outcomes, this paper identifies several broad conclusions that can be drawn about the effectiveness of institutional programming, discusses gaps in the literature, and proposes a number of directions for future research.

## **Pre- and Post-Release Outcomes**

This paper reviews four pre- and post-release outcomes: (1) prison misconduct, (2) recidivism, (3) post-release employment, and (4) cost avoidance.

### **Prison Misconduct**

Commonly defined as the failure of inmates to follow institutional rules and regulations (Camp et al., 2003), prison misconduct comprises behavior that ranges from disobeying orders and possessing contraband (e.g., alcohol, drugs, etc.) to assaulting staff and other inmates. Offenders typically receive sanctions for rule infractions, including increased incarceration time, which can exact a monetary cost on correctional systems (French & Gendreau, 2006).

Existing research reveals that both individual- and institutional-level factors are associated with prison misconduct. In their meta-analysis, Gendreau, Goggin, and Law (1997) found that antisocial attitudes and behavior, a previous criminal history, and age were the strongest individual-level predictors of disciplinary infractions. Reflecting the findings reported by Gendreau and colleagues (1997) that having antisocial companions increases the likelihood of misconduct, several studies have indicated that gang membership (i.e., identification as a member of a security threat group) is positively associated with rule violations (Gaes et al., 2002; Tewksbury, Connor, & Denney, 2014). Gendreau, Goggin, and Law (1997) also noted that social achievement (e.g., education, employment, marital status, etc.), early family factors, and race had modest associations with disciplinary infractions. Research further indicates that misconduct is affected by institution-level factors such as size, location, and security level, as well as the overall characteristics of staff and inmates (Camp et al., 2003; Huebner, 2003; Steiner & Woolredge, 2008).

### **Recidivism**

Recidivism is the most common measure of correctional program effectiveness. Generally considered to be a return to criminal behavior, recidivism is the main post-release outcome reviewed in this paper. Measures of recidivism typically include rearrest, reconviction, resentencing to prison for a new felony-level offense, and a return to prison for a technical violation revocation. Research has shown that a majority of released prisoners recidivate, particularly when measured as a rearrest, within at least three years of release from prison (Langan & Levin, 2002). In their study of more than 400,000 offenders released from prisons in 30 states in 2005, Durose, Cooper, and Snyder (2014) report that 68 percent were rearrested within three years and 77 percent were rearrested over a five-year follow-up period.

Durose and colleagues (2014) also found that recidivism rates were higher for men, non-whites, younger offenders, and those with longer criminal histories, which is consistent with previous research showing that gender, race, age, and criminal history are among the strongest “static” (i.e., factors that cannot change) predictors of reoffending (Gendreau, Little, & Goggin, 1996). Research has also shown that there are “dynamic” factors (i.e., those that are susceptible to change) that are generally predictive of recidivism. In their meta-analysis, Gendreau and colleagues (1996) reported that dynamic factors such as criminogenic needs (e.g., attitudes supportive of an antisocial lifestyle, substance abuse, antisocial companions, etc.), personal distress (e.g., anxiety, depression, schizophrenia, etc.), and social achievement (e.g., marital status, level of education, employment, etc.) are significantly associated with recidivism risk. As discussed later in this review, institutional programming is often geared toward addressing such dynamic risk factors because they are the areas in which change

can take place. For example, delivering substance abuse treatment to chemically dependent offenders will presumably help reduce their recidivism risk.

### Post-Release Employment

Unlike recidivism, very little research has focused on identifying the factors associated with post-release employment. To be sure, not all institutional programming is designed to improve post-release employment outcomes; nevertheless, employment is often considered to be critical in helping offenders successfully transition from prison to the community. Although research suggests that an offender who finds a job is less likely to reoffend (Skardhamar & Telle, 2012), post-release employment is also important from a cost-benefit perspective. After all, when offenders are working, they are usually paying income taxes, which helps generate revenue for federal and state governments.

Whereas offender post-release employment can provide a tangible monetary benefit, research has demonstrated that crime is very costly to society (Cohen & Piquero, 2009). There are victim costs, criminal justice system costs (including police, courts, and corrections), and lost-productivity costs associated with individuals who are incarcerated. Moreover, when offenders are imprisoned, institutional misconduct represents an additional cost because correctional staff time is taken up with processing discipline violations, confinement time for offenders may be extended, and segregation sanctions may result (Lovell & Jemelka, 1996).

### Cost Avoidance

When correctional programming can reduce misconduct, lower recidivism, and improve post-release employment outcomes, it can generate a monetary benefit to society, mostly through costs avoided from the prevention of crime. The use of cost-benefit analyses to assess the effectiveness

of correctional programming is still in its infancy, although research, mainly from Washington state and Minnesota, has provided cost-avoidance estimates for most of the programs reviewed in this paper.

## From “Nothing Works” to “What Works”

The publication of Robert Martinson’s “what works” study in 1974 was a pivotal moment in the history of correctional programming. The well-known conclusion from this study and another he co-authored the following year (Lipton, Martinson, & Wilks, 1975) on the effectiveness of programming in reducing recidivism was that “nothing works.” The “nothing works” conclusion helped shift the focus from the rehabilitative ideal that had prevailed during the 1950s and 1960s to deterrence and “just deserts,” especially during the 1980s and 1990s. In the wake of the widespread attention this research received, scholars critiqued its methods and challenged its conclusions (Gottfredson, 1979; Palmer, 1978; Wholey, 1979). Over the long term, however, the “nothing works” claim was the catalyst for the emergence of the “what works” movement within corrections, which has shown that some correctional interventions are effective in reducing recidivism.

This body of research, which has come to be known as the “what works” literature, later gave rise to the principles of effective correctional intervention, which hold that programming should be matched to an offender’s risk of reoffending, criminogenic needs, and responsivity issues (Gendreau, French, & Gionet, 2004). Because correctional resources are often scarce, the risk principle suggests that we can get the most “bang” for our treatment “buck” by focusing on higher risk offenders. The risk-needs-responsivity (RNR) model calls for offender risk to be assessed using actuarial risk assessment tools that have

been validated and normed (Andrews & Bonta, 2010). The most intensive programs — generally measured by total length and number of hours — should be reserved for offenders with a higher recidivism risk (Sperber, Latessa, & Makarios, 2013).

Whereas the risk principle identifies whom we should treat, the needs principle tells us what areas we should treat. Criminogenic needs are individual characteristics that increase the risk of recidivism (Latessa & Lowenkamp, 2005). Under the RNR framework, one distinction among risk factors is whether they are static or dynamic. Although criminal history is typically the strongest predictor of future criminal behavior (Caudy, Durso, & Taxman, 2013; Duwe, 2014c), it is a static factor that cannot be changed through intervention. Dynamic risk factors, on the other hand, can be targeted through intervention because changes can be made in these factors. When offenders enter prison, they are often undereducated, have little or no previous work history, lack vocational skills, have lengthy histories of substance abuse, and are more likely to suffer from mental illness (Petersilia, 2003). Much of the institutional programming provided to offenders is geared toward addressing these criminogenic need areas.

Research has further categorized recidivism risk factors as major, moderate, and minor (Andrews, Bonta, & Wormith, 2006). Included among the four major risk factors (i.e., the “big four”) are a history of antisocial behavior, antisocial personality pattern, antisocial cognition, and antisocial associates. Of the big four, a history of antisocial behavior is static, whereas the others are dynamic needs areas. Moderate risk factors include family/marital, education/employment, leisure/recreation, and substance abuse. Major mental disorder, low IQ, and social class are considered minor risk factors (Andrews, Bonta, & Wormith, 2006).

The RNR model holds that because individual characteristics can affect responsiveness to treatment programming, these issues should be considered when assigning offenders to interventions (Andrews & Bonta, 2010; Dowden & Andrews, 1999). More specifically, the responsivity principle indicates that treatment delivery should be tailored to the learning styles, abilities, and strengths of offenders (Andrews, Bonta, & Wormith, 2006).

## Program Integrity: Why It Matters

In general, programs designed in accordance with established principles of effective correctional intervention that maintain integrity upon implementation should be more successful than those that deviate from their original designs and compromise evidence-based program elements (Andrews & Dowden, 2005; Gendreau, Goggin, & Smith, 1999; Lowenkamp, Latessa, & Smith, 2006). The principles of effective correctional intervention have, over time, increasingly been used by U.S. correctional systems as the guiding framework for program delivery; yet, to some extent, these principles still represent the ideal more than reality. Indeed, validated risk assessment tools are not always used to determine recidivism risk, programming dosage is not consistently calibrated to recidivism risk, and offenders are sometimes assigned to interventions regardless of their criminogenic needs or responsivity issues.

As Latessa and colleagues (2002) point out, many correctional programs fail to work because they are not rooted in sound criminological theory and, thus, exemplify “correctional quackery.” At the same time, however, a common reason for the failure of programs, including those with a solid

theoretical foundation, is that they lack therapeutic integrity (Cullen & Gendreau, 2000). Scholars have argued that some of the variation in effectiveness observed among meta-analyses of correctional programs likely stems from a lack of program integrity (Cullen, 2002; Gendreau, 1996). Despite its importance, program integrity has often been overlooked within the correctional literature. The consensus from the few existing studies on this topic, however, is that program integrity is critical to the success of programming.

The Correctional Program Assessment Inventory (CPAI) and the Evidence-Based Correctional Program Checklist are two standardized assessments created specifically to assess the design and implementation of correctional programs (Gendreau & Andrews, 1994; Latessa, 2012). Two studies have used the CPAI to examine the relationship between program integrity and recidivism outcomes. Using a condensed version of the CPAI to carry out second-hand assessments of correctional programs based on 173 recidivism outcome evaluations with 266 effect sizes, Nesovic (2003) found that higher CPAI scores were associated with larger recidivism reduction effects. Relying on a more complete, yet still condensed, version of the CPAI, Lowenkamp and colleagues (2006) analyzed data from community-based residential programs (halfway houses) in Ohio. Matching more than 3,000 parolees released to halfway houses with a similar set of parolees not released to halfway houses, Lowenkamp and colleagues (2006) reported that higher program integrity was associated with larger reductions in recidivism for halfway house residents relative to the comparison group.

More recently, Duwe and Clark (2015) evaluated the impact of program integrity on recidivism outcomes for Moving On, a cognitive-behavioral program designed for female offenders. From the time the program was implemented in Minnesota's lone female prison until 2010, Moving

On operated with relatively high fidelity; but from 2011 to 2013, changes were made in the program that compromised that fidelity. The length of the class was shortened from 12 weeks to three weeks, class time diminished from 48 hours to 30 hours, role-playing exercises were removed, the program went from being voluntary to mandatory, and class sizes ballooned from five to 10 offenders per class to more than 40. Using three different sets of comparisons, Duwe and Clark (2015) found the high-fidelity program significantly reduced reoffending, but the low-fidelity program did not. Moreover, when directly comparing the high-fidelity version with the low-fidelity version, offenders who participated in the high-fidelity version had significantly better recidivism outcomes.

This review does not focus on “correctional quackery” programs, such as shock-based interventions, music therapy, or pet therapy, which are not grounded in sound criminological theory and have not been subjected to much (if any) empirical evaluation. Instead, the focus here is on programs often provided in state and federal prisons across the U.S. that have not only been evaluated, but also attempt to address one or more criminogenic needs. Nevertheless, it bears repeating that the vast majority of correctional program evaluation research has generally ignored the issue of program integrity. The empirical evidence reviewed for this paper should therefore be filtered through this prism of inattention to program integrity, which suggests that the variability in effectiveness among correctional programs may have more to do with program-fidelity issues than with the design and content of the programs themselves.

## Quality of the “What Works” Literature

Another lens through which the “what works” literature must be viewed has to do with the quality of the research.



Meta-analyses rely on findings from individual program evaluations to produce an aggregate effect size for an intervention. Although effort is often made to account for the rigor with which each individual program is evaluated, meta-analyses are still limited, to a large extent, by the quality of the evidence. Meta-analyses have been published on most of the types of programs reviewed in this paper, and these meta-analyses have identified a number of problems that apply to much of the correctional program evaluation literature.

First, randomized controlled trials (RCTs), which are widely considered to be the “gold standard” in program evaluation research, have seldom been used within corrections. For example, in their first meta-analysis of the sex offender treatment literature, Lösel and Schmucker (2005) examined 80 comparisons (69 studies) between treated and untreated sex offenders. Of these comparisons, only six (7 percent) used a randomized experimental design — most notably, the research by Marques and colleagues (Marques et al., 1994; Marques, 1999; Marques et al., 2005) — while seven (9 percent) used individual matching or statistical control in an effort to achieve equivalence between the treatment and comparison groups. Instead, most sex offender treatment studies have used either nonequivalent comparison groups (60 percent) or research designs in which equivalence was assumed between the treated and untreated groups (24 percent).

Second, given the infrequency with which random assignment or matching techniques (e.g., propensity score matching) have been used, selection bias has been identified as a problem that plagues much of the correctional program evaluation research (Harkins & Beech, 2006; Jones, Pellissier, & Klein-Saffran, 2006; Pellissier et al., 2001; Rice & Harris, 2003). In evaluations of treatment effectiveness, selection bias refers to differences — both observable and unobservable — between the treated and untreated groups that make it difficult

to determine whether the observed effects are due to the treatment itself or to the different group compositions. Therefore, although an evaluation may find that recidivism rates are generally lower for offenders who participate in treatment, this difference may not necessarily be due to the treatment itself but, rather, to other differences between treated and untreated offenders.

Other commonly identified problems include small sample sizes, failure to include program dropouts within the treatment group, and the use of short follow-up periods for recidivism (Welsh, 2002; Lösel & Schmucker, 2005). Although it must be acknowledged that sufficient rigor is lacking in many of the existing correctional program evaluations, this paper generally focuses on higher quality evidence in reviewing the impact of institutional programming on pre- and post-release outcomes. This review will emphasize the results from meta-analyses as well as the findings from individual evaluations that used rigorous methodology (e.g., RCTs, regression-discontinuity, or propensity score matching with quasi-experimental designs) to achieve equivalence between the treatment and comparison groups. This paper also includes technical reports and studies published in peer-reviewed academic journals.

## Educational Programming

Education, like employment, is considered to be a moderate criminogenic need (Andrews, Bonta, & Wormith, 2006). Compared to the general public, prisoners are often undereducated. For example, Duwe and Clark (2014) reported that roughly two-fifths of offenders entering Minnesota prisons had neither a high school diploma nor a General Educational Development (GED) degree. The prevalence of educational programming in prisons is likely due to the well-documented



relationship between low educational achievement and antisocial behaviors. Several studies have linked poor academic performance among adolescents to juvenile delinquency and future offending, although the direction of the causal relationship remains unclear (e.g., Farrington, 2005; Hagan & McCarthy, 1997; Huizinga et al., 2000; Maguin & Loeber, 1996; Moffitt, 1993). A felony record diminishes the likelihood of future employment (Berstein & Houston, 2000), and many offenders have unstable work histories (Visher, LaVigne, & Travis, 2004). Moreover, unemployment rates appear to directly correspond with levels of education, and the employment prospects for offenders are already weak, regardless of their educational attainment.

In reviewing the impact of educational programming on prison misconduct, the literature has yielded mixed results. In their meta-analysis, French and Gendreau (2006) report that educational or vocational programming was not associated with a decrease in discipline infractions. Although Steiner and Woolridge (2008) initially reported that participation in education programming actually increased misconduct, they later found that time spent in educational or vocational programming reduced nonviolent misconduct (Steiner & Woolridge, 2014). Most recently, Duwe and colleagues (2015) found that participation in a prison bible college significantly reduced misconduct.

Meta-analyses of research have shown that prison education reduces recidivism, although the effect sizes are usually modest. Adams and colleagues' (1994) review of more than 90 studies of prison education programs revealed that prison education reduces the likelihood of recidivism, especially for offenders with the largest education deficits. Wilson, Gallagher, and MacKenzie's (2000) meta-analysis of 33 evaluations of prison-based education programs showed modest increases in post-release employment and reductions in

recidivism for participants. In particular, they found that education programs reduced recidivism by 11 percent. Aos, Miller, and Drake (2006) found that basic adult education programs in prison lowered recidivism by more than 5 percent, and prison-based vocational programs reduced recidivism by more than 12 percent (based on the results of three studies).

In the most recent meta-analysis, Davis and colleagues (2013) examined the effects of correctional education programming on recidivism and post-release employment. Analyzing previous studies, Davis and colleagues reported that participation in education programming reduced the odds of recidivism by 43 percent and that participating in secondary degree programs yielded a 30 percent decrease in recidivism. Finally, they found that participating in education programming increased the odds of post-release employment by 13 percent.

Since the publication of Davis and colleagues' (2013) meta-analysis, there have been three separate rigorous evaluations of prison-based educational programming. In their study on Florida prisoners, Cho and Tyler (2013) found that educational programming improves post-release employment outcomes. They did not find, however, that it yielded a significant decrease in recidivism. Using propensity score matching, Kim and Clark (2013) found that prison-based college education programs significantly reduced recidivism among New York prisoners. Examining prisoners in Minnesota, Duwe and Clark (2014) evaluated the effects of obtaining secondary (GED or high school) and post-secondary degrees in prison on post-release employment and recidivism. They found that obtaining a secondary degree in prison increased the odds of securing post-release employment by 59 percent but did not have a significant effect on other employment measures such as hourly wage, total hours worked, and total wages earned. Moreover, earning a secondary degree in prison did

not have a significant effect on recidivism. Obtaining a post-secondary degree in prison, however, was associated with greater number of hours worked and higher overall wages. Furthermore, earning a post-secondary degree significantly reduced recidivism. Although it is important that offenders obtain employment following their release from prison, Duwe and Clark (2014) argued that maintaining employment is what appears to be critical in reducing recidivism.

Although educational programming has generally yielded modest effect sizes for recidivism reduction, it has generated relatively large cost-avoidance estimates. Aos and Drake (2013) report a return on investment (ROI) of \$19.62 for prison-based correctional education (basic and post-secondary) and \$13.21 for vocational education. Duwe (2013a) reported that every dollar spent on secondary and post-secondary educational programming in the Minnesota Department of Corrections (MnDOC) generated \$3.69 in cost-avoidance benefits. Moreover, because of the large number of offenders enrolled in educational programming, it generated the second-highest cost-avoidance estimate (\$3.2 million) among more than a dozen MnDOC programs evaluated.

Following is a summary of educational programming's effects on each of the four outcomes examined in this paper:

**Prison misconduct:** *The results are mixed overall, although the evidence suggests that post-secondary educational programming may yield better outcomes.*

**Post-release employment:** *Both secondary and post-secondary educational programming have yielded positive results.*

**Recidivism:** *Although there have been exceptions, the evidence suggests that educational programming, especially post-secondary education, reduces recidivism.*

**Cost-benefit:** *Existing research suggests that educational programming produces a relatively high return on investment.*

## Employment Programming

Research suggests that work is a buffer against crime and, more narrowly, recidivism (Skardhamar & Telle, 2012). Individuals are less likely to commit crime when they work more often (Uggen, 1999) and have employment that is stable (Crutchfield & Pitchford, 1997), considered satisfying (Uggen, 1999), and perceived as having career potential (Huiras, Uggen, & McMorris, 2000). As noted above, however, offenders have criminal records and are often undereducated, both of which make it more difficult to find employment following release from prison. To address this criminogenic need, correctional systems frequently provide prisoners with employment programming, which includes prison labor opportunities as well as participation in programs such as work release.

Although there have been exceptions (French & Gendreau, 2006; Steiner & Woolredge, 2008), employment programming has generally been found to reduce prison misconduct. As discussed below, Saylor and Gaes (1997) found that participation in the Federal Bureau of Prisons' (BOP's) Post-Release Employment Project (PREP) significantly reduced misconduct. Furthermore, Gover, Perez, and Jennings (2008) reported that employment in prison reduced disciplinary infractions. Similarly, Steiner and Woolredge (2014) indicated that the number of hours spent per week on a work assignment was negatively associated with both violent and nonviolent misconduct. They also found that time spent in educational or vocational programming reduced nonviolent misconduct (Steiner & Woolredge, 2014).

In their meta-analysis of corrections-based educational, vocational, and work programs, Wilson, Gallagher, and MacKenzie (2000) were able to identify only four comparisons between offenders who participated in a correctional work/industry program and offenders who did not participate in this type of programming. Although the odds ratio for these four contrasts was 1.48, which amounts to a recidivism reduction of 20 percent, the effect was not statistically significant. Among the correctional work/industry program evaluations analyzed by Wilson and colleagues (2000) were studies of New York's Prison Industry Research Project (PIRP) (Maguire, Flanagan, & Thornberry, 1988) and BOP's PREP (Saylor & Gaes, 1997). In their evaluation of PIRP, Maguire and colleagues did not find a statistically significant difference in recidivism between offenders who worked in prison industries and those who did not. Unlike Maguire and colleagues (1988), Saylor and Gaes (1997) used propensity score matching and a Cox proportional hazards model to control for rival causal factors, including selection bias and time at risk. Using a more sophisticated and rigorous design, Saylor and Gaes (1997) found that prison employment significantly lowered recidivism and increased employment.

In a more recent evaluation of a federal prison industry program, UNICOR, Richmond (2014) evaluated its impact on recidivism among female prisoners. Also relying on propensity score matching, Redmond (2014) found that the program did not reduce recidivism. Similarly, in their evaluation of the Affordable Homes Program (AHP), a prison work crew program that trains Minnesota offenders in the construction trade while they are serving time in prison, Northcutt Bohmert and Duwe (2012) report that the program had no effect on recidivism. The results from this study revealed, however, that AHP participants did have significantly higher odds of gaining employment in

a construction-related field than did members of the comparison group but did not have significantly higher odds of gaining employment in "any field."

U.S. correctional agencies have long relied on the use of prison work release programs, which have operated in the U.S. since the 1920s (Turner & Petersilia, 1996). According to the most recent census of state and federal correctional facilities, all but one of the 50 states run a prison work release program (Stephan, 2008). Work release allows participants, who are usually near the end of their prison terms, to work in the community and return to a correctional or community residential facility during nonworking hours. Work release provides offenders with a stable residence in a controlled environment and gives them opportunities to earn income and accumulate savings for their eventual release (Turner & Petersilia, 1996). Moreover, because participants are granted early release from prison and are typically required to reimburse the state for part of their confinement costs, work release can help reduce prison overcrowding and decrease correctional costs (Turner & Petersilia, 1996).

Findings from existing evaluations, which are generally outdated, suggest that work release has, at best, a modest effect on recidivism. Most notably, the two studies that used a randomized experimental design did not find that work release reduced recidivism. For example, in their evaluation of a Florida work release program, Waldo and Chiricos (1977) found that reoffending was not significantly less among 188 work release participants than among the 93 offenders from the control group. Of the seven evaluations using a quasi-experimental design, four found that work release significantly reduced recidivism (Drake, 2007; Duwe, 2014b; Rudoff & Esselstyn, 1973; LeClair & Guarino-Ghezzi, 1991). Of these, the most notable are the recent evaluations

by Drake (2007) and Duwe (2014b). After matching 3,913 offenders who did not participate in Washington's work release program with 11,413 program participants, Drake (2007) reported that the program produced a statistically significant, albeit modest, reduction in recidivism. Similarly, in an evaluation of Minnesota's work release program, Duwe (2014b) found that it significantly increased the hazard of returning to prison for a technical violation, although it significantly reduced, albeit modestly, the risk of reoffending with a new crime.

Although recidivism has been the main outcome measure assessed in previous work release evaluations, the three studies that also examined employment have yielded promising findings. Lamb and Goertzel (1974) reported that work release participants had higher employment rates than did offenders in the control group. Using self-report data, Witte (1977) found that work release participants reported higher employment rates and greater overall earnings than did offenders in the comparison group. Furthermore, Duwe (2014b) indicated that work release did not have an impact on hourly wage, but it significantly increased the odds that participants found work, the total hours worked, and the total wages earned.

In contrast to employment programs that provide services primarily in prison or the community is Minnesota's EMPLOY program, which delivers services to participants in both the institution and the community. Duwe's (2015b) evaluation of the program found that approximately 60-90 days before their release from prison, EMPLOY participants begin meeting with a job training specialist to address issues such as skills assessments, resumes, job searching techniques, and interviewing skills. During the week before a participant is released from prison, a job development specialist begins searching for job leads based on the participant's vocational skills and calling employers who are known

to hire ex-offenders. Upon their release from prison, a retention specialist provides participants with a portfolio that contains copies of their resumes, any certification submitted to EMPLOY, job leads, and additional resources or tools to assist them with their job search. After this initial meeting, the retention specialist maintains contact with each participant during the first year after release and continues to provide support by helping the participant with job leads and resume maintenance (Duwe, 2015b). The EMPLOY evaluation showed that the program significantly increased employment and decreased reoffending (Duwe, 2015b). Participants were not only more likely than their comparison group counterparts to find jobs after their release from prison, but they were also more likely to maintain their employment, resulting in more total wages earned.

Overall, the evidence suggests that while the effect of prison labor on recidivism is, at best, minimal, the impact on prison misconduct and post-release employment has generally been favorable. In their cost-benefit analysis, Aos and Drake (2013) report an ROI of \$4.74 for the prison industry. Among employment programs that are more community-oriented, such as work release, the findings have been positive for employment and more mixed for recidivism. Aos and Drake (2013) report an ROI of \$11.19 for work release and a benefit of nearly \$6,900 per participant. In the evaluation of Minnesota's work release program, Duwe (2014b) reported a cost avoidance of nearly \$700 per participant, for a total of \$350,000 annually. Furthermore, in a cost-benefit analysis of MnDOC programming, Duwe (2013a) reported that EMPLOY generated an ROI of \$6.45, for a total of \$2.8 million in costs avoided annually.

Following is a summary of the effects of employment programming on each of the four outcomes.

**Prison misconduct:** *Employment programming, particularly prison labor, has generally been found to reduce prison misconduct.*

**Post-release employment:** *Employment programming has typically improved post-release employment outcomes for offenders.*

**Recidivism:** *The results have varied by type of program. Prison labor has not consistently been found to lower recidivism and work release produces, at best, a modest reduction. The most promising findings have been for employment programming that provides a continuum of service delivery.*

**Cost-benefit:** *Existing research suggests that employment programming produces a solid, if unspectacular, ROI.*

## Cognitive Behavioral Therapy

Cognitive behavioral therapy (CBT) programs generally address the link between dysfunctional thought processes and harmful behaviors through timely reinforcement and punishment, as well as role-playing and skill-building exercises. These programs seek to improve decision-making and problem-solving skills, and to teach individuals how to manage various forms of outside stimuli. The programs attempt to reduce recidivism by targeting an array of risk factors, including general antisocial cognition and chemical dependency. It is worth noting that other types of programs, including substance abuse treatment and sex offender treatment, are often delivered within a cognitive-behavioral framework. This section of the paper, however, focuses on the more general CBT programs that address multiple criminogenic needs, but mostly criminal thinking.

Reasoning & Rehabilitation (R&R), Moral Reconciliation Therapy (MRT), and Thinking for a Change (TFAC) are among the most widely used and evaluated CBT programs for offenders. While Van Voorhis et al.

(2004) found that R&R did not significantly improve employment or recidivism outcomes among Georgia parolees, the program has generally proven successful in reducing reoffending, particularly for Canadian offenders. Evaluations of MRT have shown that it reduces recidivism (Ferguson & Wormith, 2012; Little, Robinson, & Burnette, 1993), although Armstrong (2003), using an RCT, found that it did not have a significant effect on recidivism among youthful jail inmates in Maryland. While TFAC has been found to improve recidivism outcomes, much of its success has been with probationers (Golden, Gatchel, & Cahill, 2006; Lowenkamp et al., 2009). Although less research has been conducted on Moving On, a gender-responsive CBT designed specifically for female offenders, results from the two evaluations on this program indicate that it is effective in decreasing recidivism (Duwe & Clark, 2015; Gehring, Van Voorhis, & Bell, 2010).

Overall, CBT programs have been found to be successful in reducing prison misconduct and recidivism. In their meta-analysis on what works to reduce prison misconduct, French and Gendreau (2006) concluded that CBT programs are the most effective intervention for curbing disciplinary infractions. CBT has also been found to be one of the more effective correctional tools for reducing recidivism (Allen, MacKenzie, & Hickman, 2001; Landenberger & Lipsey, 2005; Lipsey, Chapman, & Landenberger, 2001; Lipsey, Landenberger, & Wilson, 2007; Pearson et al., 2002; Wilson, Bouffard, & MacKenzie, 2005). The results from these meta-analyses have generally shown that CBT programs reduce recidivism by 20 percent to 30 percent. Larger reductions have been found for programs that targeted higher risk offenders, had high-quality treatment implementation, and included anger control and interpersonal problem solving. None of the brand-name programs, such as TFAC, MRT, or R&R, did significantly better or worse. Furthermore,



the setting in which the programming was delivered — prison or the community — did not have a significant impact on effect size (Landenberger & Lipsey, 2005; Lipsey, Landenberger, & Wilson, 2007).

CBT programs have also performed well in cost-benefit analyses. Aos and Drake (2013) found that CBT programs for moderate- and high-risk offenders yield a significant ROI. The researchers reported a cost-benefit ratio of \$24.72; every dollar spent on CBT programming yielded \$24.72 in benefits. Of the 26 interventions for adult offenders, CBT had the third highest ROI (Aos & Drake, 2013).

Following is a summary of the effects of CBT programming on the outcomes examined in this paper.

**Prison misconduct:** *CBT programs have been found to have the best outcomes for prison misconduct.*

**Post-release employment:** *No evidence is available.*

**Recidivism:** *CBT programs have produced relatively strong results in reducing recidivism.*

**Cost-benefit:** *CBT programs have been found to provide some of the highest ROIs for correctional programming.*

## Chemical Dependency Treatment

Among state and federal prisoners incarcerated in 2004, Mumola and Karberg (2006) reported that 32 percent committed their offenses while under the influence of drugs and 56 percent had used drugs in the month preceding the offense. Substance abuse has been identified as a moderate criminogenic need, although recent research suggests that it may be a more important risk factor for recidivism (Caudy, Durso, & Taxman, 2013). Given the

relatively high rate of substance abuse and dependency among incarcerated offenders, efforts to reduce their risk of reoffense often include the provision of prison-based CD treatment.

Previous evaluations of prison-based CD treatment have concentrated mainly on programs that use the therapeutic community (TC) model. Originating in England during the late 1940s, the TC model regards CD as a symptom of an individual's problems rather than the problem itself (Patenaude & Laufersweiler-Dwyer, 2002). Viewing substance abuse as a disorder that affects the whole person, the TC model attempts to promote comprehensive prosocial changes by encouraging participants to contribute to their own therapy and to that of others through activities such as therapy, work, education classes, and recreation (Klebe & O'Keefe, 2004). Individual and group counseling, encounter groups, peer pressure, role models, and a system of incentives and sanctions often comprise the core of treatment interventions in a TC program (Welsh, 2002). To foster a greater sense of community, participants are housed separately from the rest of the prison population.

Very little research has examined the effects of CD treatment on prison misconduct. For example, Steiner and Woolredge (2008) reported that participation in drug treatment programming actually increased misconduct.

Instead, previous evaluations have focused on relapse and, more often, recidivism. These studies have evaluated prison-based TC programs for federal prisoners (Pelissier et al., 2001) as well as for state prisoners in California (Prendergast et al., 2004; Wexler et al., 1999), Delaware (Inciardi et al., 1997; Inciardi, Martin, & Butzin, 2004), Minnesota (Duwe, 2010), New York (Wexler, Falkin, & Lipton, 1990), Oregon (Field, 1985), Pennsylvania (Welsh, 2007) and

Texas (Knight et al., 1997; Knight, Simpson, & Hiller, 1999).

In general, the findings from these studies suggest that prison-based treatment can be effective in reducing recidivism and relapse. Indeed, in the most recent meta-analysis of the incarceration-based drug treatment literature, Mitchell, Wilson, and MacKenzie (2007) found that treatment significantly decreased subsequent criminal offending and drug use in their review of 66 evaluations. The average treatment effect sizes for recidivism and drug use were odds ratios of 1.37 and 1.28, respectively (Mitchell et al., 2007). In a more recent review, Bahr, Masters, and Taylor (2012) report that CBTs, TCs, and drug courts were the most effective types of substance abuse programs.

Existing research highlights the importance of aftercare, as the most promising outcomes have been found for offenders who complete prison-based TC programs, especially those who participate in post-release aftercare (Butzin, Martin, & Inciardi, 2005; Inciardi et al., 2004; Mitchell et al., 2007; Pearson & Lipton, 1999). In addition, Duwe (2010) and Wexler, Falkin, and Lipton (1990) reported that treatment effectiveness is related to the length of time an individual remains in treatment, but only up to a point. As time in substance abuse treatment increased, so did the time until recidivism. The risk of recidivism was greater, however, for offenders who had been in the treatment program for a year or more (Duwe, 2010; Wexler et al., 1990).

In their cost-benefit research on correctional programming, Aos and Drake (2013) reported an ROI of \$14.82 for inpatient/intensive drug treatment and \$31.34 for outpatient/nonintensive, prison-based drug treatment. In research on Minnesota prisoners, Duwe (2013a) found that for every dollar spent on CD treatment, the program generated \$6.32 in benefits. Moreover, with relatively high

enrollment compared to other MnDOC programs, CD treatment produces an estimated \$22 million in costs avoided each year, accounting for approximately 60 percent of the overall cost-avoidance benefits produced by MnDOC programming.

Following is a summary of the effects of CD treatment on the four outcomes.

**Prison misconduct:** *Very little evidence exists, although one study found that prison-based drug treatment increased misconduct.*

**Post-release employment:** *No evidence is available, although CD treatment has been found to be successful in preventing relapse.*

**Recidivism:** *Results generally show that prison-based CD treatment is successful in reducing recidivism, especially if the treatment provides a continuum of care, uses a TC, and is delivered within a cognitive-behavioral framework.*

**Cost-benefit:** *Existing research reveals relatively strong ROI outcomes for prison-based CD treatment, especially for outpatient/nonintensive programs.*

## Sex Offender Treatment

Existing research has shown that compared to other offenders, sex offenders are among the least likely to reoffend (Harris & Hanson, 2004; Langan & Levin, 2002; Sample & Bray, 2006). Moreover, when sex offenders recidivate, they are much more likely to do so with a nonsexual offense (Langan, Schmitt, & Durose, 2003). Although sex offenders are among the least likely to recidivate in general, they are still more likely than other offenders to reoffend sexually (Langan & Levin, 2002). When sex offenders recidivate with a sex offense, at least 75 percent victimize individuals (both adults and children) they already know (Greenfield, 1997; Snyder, 2000). Common predictors of sexual recidivism include an antisocial orientation (e.g.,



history of rule violation), deviant sexual interests, a history of victimizing strangers, conflicts in intimate relationships, emotional identification with children, and prior noncontact sex offenses (Hanson & Morton-Bourgon, 2004). The risk of sexual recidivism is lower for incest offenders, first-time sex offenders, those over the age of 50, and those who target female children rather than male children (Harris & Hanson, 2004).

Given the heightened interest in and concern about sexual offending, the deeply destructive effects of these crimes on victims, and the fact that previous sex offenses generally increase the risk of sexual offending, the past several decades have brought forth a host of legislative efforts to control sexual offending, particularly for offenders previously convicted of a sex crime. To a large extent, the guiding principle behind longer prison sentences for sex crimes, registration and notification, residency restrictions, involuntary civil commitment, and lifetime probation and parole for sex offenders is that incidences of sexual offending can be reduced by increasing the risks and costs associated with committing a sex offense. Although these legislative strategies have been grounded in the punitive ideologies of deterrence and just deserts, sex offender treatment has been widely used to lower sexual recidivism.

Since the 1960s, dozens of studies from a number of countries have examined whether sex offender treatment reduces recidivism. The earliest studies drew pessimistic conclusions about the effectiveness of treatment. For example, in their review of the treatment literature, Furby, Weinrott, and Blackshaw (1989) argued that, due to methodological shortcomings, there was insufficient evidence to support the notion that treatment decreases sex offender recidivism. Several years later, Quinsey et al. (1993) reached a similar conclusion in their review of existing treatment studies.

From the mid-1990s to the mid-2000s, however, meta-analyses of the treatment literature found, with a few notable exceptions (Kenworthy et al., 2004; Rice & Harris, 2003), lower sexual recidivism rates for treated sex offenders in comparison with untreated offenders (Alexander, 1999; Gallagher et al., 1999; Hall, 1995; Hanson et al., 2002; Lösel & Schmucker, 2005). Among the meta-analyses that have found a treatment effect, the rate of sexual reoffense has been 5 percent to 10 percent less for those who participated in treatment.

Since the publication of these meta-analyses, there have been several rigorous evaluations of prison-based sex offender treatment. Examining more than 2,000 Minnesota sex offenders, Duwe and Goldman (2009) found that participating in treatment significantly reduced the hazard of rearrest — by 27 percent for sexual recidivism, 18 percent for violent recidivism, and 12 percent for general recidivism. Analyzing a smaller sample of sex offenders in North Carolina's prison system, Grady and colleagues (2012) did not find that treatment significantly reduced sexual recidivism.

Most recently, Lösel and Schmucker (2015) published an updated meta-analysis of the sex offender treatment literature. This time, they limited their analysis to evaluations that used official measures of recidivism as outcome criteria and those that used equivalent treatment and control groups. After restricting their focus to more methodologically sound studies, they reported a 3.6 percent difference in sexual recidivism rates between treated and untreated sex offenders, resulting in a 26 percent reduction in sexual reoffending. The best outcomes, they concluded, were associated with programs that delivered cognitive-behavioral and multisystemic treatment.

Although the literature on sex offender treatment has not examined its effects on misconduct or other outcomes such

as employment, at least two studies have estimated its cost-avoidance benefits. Aos and Drake (2013) reported an ROI of \$2.05 for prison-based sex offender treatment, and Duwe (2013a) reported an ROI of \$3.11 for prison-based sex offender treatment in Minnesota. With annual enrollment of approximately 200 sex offenders, the program generates nearly \$2.9 million in cost-avoidance benefits per year.

Following is a summary of the effects of sex offender treatment on the four outcomes:

**Prison misconduct:** *No evidence is available.*

**Post-release employment:** *No evidence is available.*

**Recidivism:** *The evidence indicates that, in general, sex offender treatment significantly lowers sexual recidivism.*

**Cost-benefit:** *Existing research suggests that prison-based sex offender treatment provides a moderate ROI.*

## Social Support Programming

Associating with antisocial peers is, as noted earlier, one of the big four risk factors and, thus, has been characterized as a major criminogenic need. A prison inmate is surrounded by peers who are also incarcerated for antisocial, criminal behavior. Yet, even among prisoners, one relatively objective measure for determining whether offenders are maintaining antisocial relationships is their security threat group (STG) status. Offenders who are active STG members (i.e., an active gang affiliation) are, in general, committed to preserving a criminal lifestyle. Research has shown that gang membership is not only positively associated with prison misconduct (Gaes et al., 2002; Tewksbury, Connor, & Denney, 2014), but it also significantly increases the risk of recidivism, at least for male offenders (Duwe, 2014c).

Despite the salience of antisocial peers as a risk factor for both misconduct and recidivism, there are relatively few formal institutional programs that are dedicated to addressing this criminogenic need by helping offenders maintain, develop, or enhance prosocial sources of support. Prison visitation is seldom identified as a type of correctional program per se, but it is arguably the most prominent source of prosocial support for prisoners. Perhaps not surprisingly, then, research has generally shown that prison visitation is associated with reduced misconduct and recidivism.

Jiang and Winfree (2006) found that visits by children were not significantly associated with self-reported misconduct. Relying on administrative data to measure discipline convictions, Siennick, Mears, and Bales (2013) report that the odds of misconduct were lower before a visit, but higher afterwards. Other research has shown that prison visitation significantly reduces misconduct (Cochran, 2012; Tewksbury & Connor, 2012).

The findings from studies on prisoners in Florida (Bales & Mears, 2008; Cochran, 2014; Mears et al., 2012), Minnesota (Duwe & Clark, 2013), and Canada (Derksen, Gobeil, & Gileno, 2009) suggest that prison inmates who are visited more often are less likely to recidivate. Although Cochran (2014) found lower recidivism rates for offenders who were visited early in their incarceration, results from the Bales and Mears (2008) and Duwe and Clark (2013) studies suggest that visits that occur closer to an offender's release were more important in reducing recidivism. In addition, Duwe and Clark (2013) found that recidivism decreased as the number of individual visitors increased.

Several studies have examined whether some offender-visitor relationships are more beneficial than others in reducing recidivism. The results of two Florida

studies suggest that visits from spouses or significant others were associated with better recidivism outcomes (Bales & Mears, 2008; Mears et al., 2012). In both studies, offender-visitor relationships comprised seven categories: parent, spouse, significant other, child, relative, friend, and other. In their study on visitation with Minnesota prisoners, Duwe and Clark (2013) analyzed the effects of visitor type on recidivism in greater detail by examining 16 offender-visitor relationship categories. They found that visits from siblings, in-laws, fathers, clergy, and, to a lesser extent, mentors were the most beneficial in reducing the risk of recidivism.

Despite the generally positive outcomes associated with prison visitation, the literature indicates that many prison inmates are not visited at all. For example, the rate of unvisited offenders in previous studies varied from a low of 39 percent (Duwe & Clark, 2013) to a high of 58 percent (Bales & Mears, 2008). In an effort to better understand why some inmates are visited more often in prison, Tewksbury and Connor (2012) analyzed visitation among a sample of 585 male prisoners. Offenders who were white, younger, more educated, and admitted to prison on a new sentence received significantly more visits. Inmates who were identified as gang members or had longer criminal histories and disciplinary records in prison received fewer visits (Tewksbury & Connor, 2012).

Faith-based programming can offer prosocial support. One of the main components of the InnerChange Freedom Initiative (IFI), a faith-based program run by Prison Fellowship Ministries, involves providing participants with volunteer mentors from the community. Mentors are expected to meet with IFI participants on a weekly basis during the last six months of their incarceration and continue to meet with them following their release. Johnson and Larson (2003) reported

that participation in an IFI program that originated in a Texas correctional facility in 1997 did not significantly lower recidivism for all participants. However, in a more recent evaluation of an IFI program in Minnesota's prison system, Duwe and King (2013) found that program participation significantly reduced reoffending. As they explain, the beneficial recidivism outcomes for program participants may have been due, in part, to the continuum of mentoring support that some offenders received in both the institution and the community.

Results from a study by Camp and colleagues (2008) further suggest that faith-based programs can also improve inmate behavior within the institution. In their evaluation of BOP's Life Connections Program, the researchers found that participation significantly decreased more serious forms of misconduct but participation had no impact on minor infractions.

Research on Circles of Support and Accountability (CoSA), a sex offender re-entry program, offers additional evidence that providing offenders, especially those who are higher risk, with prosocial support is effective in reducing recidivism. Designed as an intervention to be used for high-risk sex offenders, CoSA involves surrounding a "core member"—the sex offender participant—with a small group (four to six) of community volunteers who provide offenders with support and help them to remain accountable during the transition from prison to the community. An evaluation of CoSA involving sex offenders from Canada, where the program originated, showed that CoSA significantly lowered recidivism, including sexual reoffending (Wilson, Cortoni, & McWhinnie, 2009). Similarly, using an RCT to evaluate the CoSA program in Minnesota, Duwe (2013b) reported that it significantly decreased multiple measures of recidivism.

To date, researchers have not examined whether prison visitation produces cost-avoidance benefits. However, in a follow-up evaluation of the IFI program in Minnesota, Duwe and Johnson (2013) showed that the program yielded nearly \$8,300 in costs avoided per participant. With an average enrollment of at least 90 offenders each year, IFI produces approximately \$750,000 annually in cost-avoidance benefits. Moreover, in his evaluation of Minnesota Circles of Support and Accountability (MnCoSA), Duwe (2013b) found that every dollar spent on MnCoSA returned \$1.82 in benefits over a three-year period. The program also generates nearly \$94,000 in cost-avoidance benefits (Duwe, 2013a).

Following is a summary of social support programming's effects on each of the four outcomes.

**Prison misconduct:** *Existing research has generally found that prison visitation decreases misconduct.*

**Post-release employment:** *No evidence is available.*

**Recidivism:** *The evidence indicates that social support programming is successful in lowering offender recidivism.*

**Cost-benefit:** *Little evidence currently exists, although a few evaluations of programs that provide social support suggest that they deliver a solid ROI.*

## Mental Health Programming

Compared to the general population, prisoners have relatively high rates of mental illness (Fazel & Danesh, 2002). In a study that reported the results of interviews with more than 20,000 offenders across the United States, James and Glaze (2006) found that nearly two-thirds of jail inmates and more than half of state and federal

prisoners reported having a mental health problem. The researchers also found that offenders with mental illness — who were more likely to be female, white, and young — experienced higher rates of institutional misconduct, homelessness, substance abuse, and previous physical or sexual abuse.

In addition to demonstrating that individuals with major mental disorders have an elevated risk for violence, especially if they misuse substances (Silver, 2006), research has shown that mental illness is associated with higher recidivism rates (Eno Louden & Skeem, 2011; Messina et al., 2004; Porporino & Motiuk, 1995). Although Andrews and colleagues (2006) acknowledge that major mental illness is a risk factor for recidivism, they emphasize that it has only a modest, indirect impact on reoffending. They argue that any effect of mental illness on recidivism likely reflects the impact of substance abuse (one of the “central eight” risk factors) along with antisocial cognition and antisocial personality pattern (two of the big four). Several recent studies have not only confirmed that mental illness is a weak predictor of recidivism, but also that the same risk factors (i.e., the central eight) apply to all offenders, regardless of whether they have a mental disorder (Bonta, Blais, & Wilson, 2014; Hall et al., 2012).

As Skeem, Manchak, and Peterson (2011) point out, mental health interventions that have proven successful in improving clinical outcomes such as reduced hospitalizations have not been especially effective in lowering recidivism when they have been adapted to correctional populations. Indeed, evidence indicates that programs focused on linking offenders to mental health services have not yielded positive recidivism outcomes overall, primarily because these interventions assume that reoffending is caused by untreated mental illness (Barrenger & Draine, 2012; Duwe, 2015a; Lurigio, 2011).

Despite mental health interventions' relative lack of success in reducing recidivism, some correctional programs have yielded positive outcomes. In their evaluation of a modified therapeutic community (MTC) program, Sacks and colleagues (2004) compared offenders released from prison with co-occurring substance abuse and mental disorders who participated in an MTC program to participants from a traditional mental health program. They not only found that MTC participants had significantly lower reincarceration rates, but also that the best outcomes were observed for completers of the in-prison MTC program who participated in the community-based aftercare portion of the program following their release from prison. Skeem and colleagues (2011) noted that the MTC program evaluated by Sacks and colleagues (2004) was the only program reviewed that targeted criminal thinking in addition to symptoms of mental illness.

Much like the MTC program evaluated by Sacks and colleagues, Washington state's Dangerous Mentally Ill Offender (DMIO) program, now called the Offender Reentry Community Safety Program, focused on providing offenders with mental disorders with a continuum of care from the institution to the community. The legislatively mandated program provides interagency collaboration and state-funded mental health and substance abuse treatment, housing, and other support services. Following designation as a DMIO, which typically occurs six months before release, an offender is immediately assigned a treatment provider by the Department of Social and Health Services. In the final 90-120 days before release, DMIO program participants receive pre-engagement services and special treatment and transition planning. For up to five years after their release from prison, DMIO participants receive services (based on their assessed needs) that may include mental health and substance abuse treatment, housing and medical assistance,

training, and other support services (Lovell, Gagliardi, & Phipps, 2005).

In the initial evaluation of the program, Lovell and colleagues (2005) found that program participants were more likely to receive prerelease community mental health services, obtain steady service in the first year after release, and be served more rapidly and in higher proportions than was the comparison group. Similarly, a more recent evaluation found that the program reduced felony recidivism by 42 percent and violent felony recidivism by 36 percent (Mayfield, 2009). Furthermore, results of a cost-benefit analysis indicate that the benefit per participant is nearly \$25,000 and generates \$1.75 in benefits for every dollar spent on the program (Aos & Drake, 2013).

Following is a summary of the impact of mental health programming on the four outcomes:

**Prison misconduct:** *No evidence is available.*

**Post-release employment:** *No evidence is available.*

**Recidivism:** *Existing research has found that mental health interventions do not reduce recidivism when the programming targets mental health symptoms. There is, however, some evidence indicating that these interventions can lower reoffending if they also target known criminogenic needs.*

**Cost-benefit:** *Little evidence exists, although evaluations of Washington's DMIO program have yielded strong ROI outcomes.*

## Domestic Violence Programming

Family criminality (i.e., parents or siblings in trouble with the law), rearing practices (e.g., conflict, abuse, lack of supervision and affection), and structure (e.g., separation from parents, broken home, foster parents)



have been found to be significant, static predictors of recidivism (Gendreau, Little, & Goggin, 1996). Gendreau and colleagues further note that interpersonal conflict, which includes family discord and conflict with significant others, is a dynamic predictor of reoffending. Given the association between family conflict and recidivism, family/marital conflict is, as noted earlier, a moderate risk factor (Andrews, Bonta, & Wormith, 2006). To address this criminogenic need, corrections agencies frequently provide offenders with programming designed to reduce domestic violence (DV) recidivism.

Due to the absence of research on the effects of DV programming on prison misconduct or post-release employment, there is no evidence as to whether this intervention affects either outcome. A fairly large number of evaluations have assessed DV's relationship with recidivism and, similar to the literature on mental health interventions, the results have not been favorable. Several relatively recent, rigorous evaluations, such as those by Gordon and Moriarity (2003), Labriola, Rempel, and Davis (2008), and Haggard and colleagues (2015) found that DV programs had no impact on recidivism. In a meta-analysis of 22 evaluations, Babcock, Green, and Robie (2004) report that DV interventions, including the commonly used Duluth model and those delivered within a CBT framework, did not reduce reoffending. Furthermore, in a more recent meta-analysis that focused on more rigorous evaluations, Miller, Drake, and Nafziger (2013) also concluded that DV programs failed to lower recidivism. In their cost-benefit analysis of adult correctional programs, Aos and Drake (2013) report that DV programming actually costs, rather than saves, taxpayer dollars. For every dollar spent on DV interventions, these programs cost taxpayers, on average, an additional \$4.41; in fact, DV programs had the worst ROI of the more than two dozen types of interventions evaluated.

Why have DV programs been ineffective at reducing recidivism? In a recent study, Radatz and Wright (2015) argue that this failure is largely due to a lack of adherence to the principles of effective correctional intervention. Although some DV programs use a cognitive-behavioral approach, Radatz and Wright (2015) suggest that, in general, these programs may not be adequately aligned with the risk, need, and responsivity principles. In particular, feminism-based programs such as the Duluth model emphasize altering patriarchal attitudes. Instead, as Radatz and Wright contend, DV programs should focus more on addressing known criminogenic needs such as antisocial attitudes, substance abuse, and social support.

Following is a summary of DV programming's effects on the four outcome measures:

***Prison misconduct:*** No evidence is available.

***Post-release employment:*** No evidence is available.

***Recidivism:*** Existing research has found that DV interventions do not reduce recidivism.

***Cost-benefit:*** Little evidence currently exists, although Washington state found that DV programs actually cost, rather than save, taxpayer dollars.

## Prisoner Re-Entry Programs

Since the turn of the 21st century, prisoner re-entry has attracted a great deal of interest for a few key reasons. First, despite the modest downturn in the imprisonment rate over the last ten years, the prison population boom over the previous several decades had led to a rise in the volume of offenders released from prison. Second, as illustrated by the large recidivism studies conducted by the Bureau of Justice Statistics (Durose, Cooper, & Snyder, 2014; Langan & Levin, 2002), the available evidence

suggests that released prisoners tend to have relatively low success rates.

In response to concern about growing numbers of released prisoners with seemingly high recidivism rates, the federal government has sponsored several major initiatives that have led to the implementation of community-level prisoner re-entry projects across the country. In 2001, the Serious and Violent Offender Reentry Initiative (SVORI) provided \$100 million in funding to 69 grantees at 89 U.S. sites. Five years later, the Prisoner Reentry Initiative provided funding to support re-entry programs in more than 30 states and, most recently, the Second Chance Act has generated several rounds of federal funding to aid local and state agencies in the creation and operation of offender re-entry projects.

The prisoner re-entry concept has been broadly applied to any program that attempts to reduce recidivism for offenders released from prison. In general, however, programs given the “prisoner re-entry” label tend to focus on improving the delivery of services and programming across multiple areas such as housing, education, employment, and substance abuse treatment.

Among the published outcome evaluations of offender re-entry programs, the findings about these programs’ ability to reduce recidivism have been mixed. Results from evaluations of programs in Indiana (McGarrell, Hipple, & Banks, 2003), Maryland (Roman et al., 2007), Minnesota (Minnesota Department of Corrections, 2006; 2011), New York (Wilson & Davis, 2006; McDonald, Dyou, & Carlson, 2008) and Pennsylvania (Smith & Suttle, 2008) indicate that none of these programs produced a statistically significant reduction in reoffending. Some explanations offered for the inability of these re-entry programs to lower recidivism include program design problems (Smith & Suttle, 2008;

Wilson & Davis, 2006), low dosage or short program duration (McGarrell et al., 2003; Smith & Suttle, 2008; Wilson & Davis, 2006), lack of administrative oversight (Smith & Suttle, 2008), poor program implementation (Minnesota Department of Corrections, 2006; Wilson & Davis, 2006), and the absence of a community aftercare component (Wilson & Davis, 2006).

Results from outcome evaluations of programs in California (Zhang, Roberts, & Callanan, 2006), Massachusetts (Braga, Piehl, & Hureau, 2009), Minnesota (Clark, 2014; Duwe, 2012, 2014a), New York (Jacobs & Western, 2007) and Nebraska (Sample & Spohn, 2008) suggest that they lowered recidivism. Five of these programs focused on improving employment outcomes for participants (Braga, Piehl, & Hureau, 2009; Clark, 2014; Duwe, 2012; Jacobs & Western, 2007; Zhang, Roberts, & Callanan, 2006), and three targeted substance abuse (Jacobs & Western, 2007; Sample & Spohn, 2008; Zhang et al., 2006) and transitional housing (Clark, 2014; Duwe, 2012; Zhang et al., 2006). Two programs provided life skills programming (Clark, 2014; Sample & Spohn, 2008), and one delivered mentoring services (Clark, 2014). Braga and colleagues (2009) and Duwe (2012) also cited interagency collaboration and increased social support as important reasons why these programs lowered recidivism.

As discussed above, millions of dollars in state and federal funding have been dedicated to the establishment of offender re-entry programs over the past 10 to 15 years. Only a handful of evaluations, however, have examined whether these programs are cost effective. In their cost-benefit analysis of the Maryland Reentry Partnership Initiative (REP), Roman and colleagues (2007) reported that for every dollar spent on REP, the program produced about \$3 in benefits over an average follow-up period of three years. The overall benefits of the program amounted to more than \$7 million, or \$21,500 per participant.



Sample and Spohn (2008) stated that Nebraska's SVORI site generated more than \$10,000 in savings per participant over a 12-month follow-up period, although it is worth emphasizing that the authors did not account for program operating costs (i.e., SVORI funding) in their analysis. In their cost-benefit analysis of 16 SVORI sites, Cowell, Lattimore, and Roman (2010) found that the SVORI group did not produce net benefits relative to the comparison group over an average follow-up period of nine months. In cost-benefit research on Minnesota's prisoner re-entry programs, Duwe (2013a) reported that two of the three projects did not produce cost-avoidance benefits. The Minnesota Comprehensive Offender Reentry Plan program, however, yielded a return of \$1.80 for every dollar spent on the program and generated \$4,300 in benefits per participant for a total of \$600,000 annually (Duwe, 2013a).

Following is a summary of the effects of prisoner re-entry programming on the four outcomes:

**Prison misconduct:** *No evidence is available.*

**Post-release employment:** *Some evidence indicates that prisoner re-entry programs can improve post-release outcome measures.*

**Recidivism:** *The results are mixed. Because of the relative absence of program evaluations that measure service delivery for offenders in the treatment and comparison/control groups, determining what distinguishes a successful prisoner re-entry program from an unsuccessful one is difficult.*

**Cost-benefit:** *With one exception, studies have found that prisoner re-entry programs can deliver a positive return on investment.*

## Discussion

Several broad conclusions can be drawn about the effectiveness of institutional

programming. First, the evidence presented herein indicates that CBT programs have proven to be the most effective in reducing prison misconduct. Moreover, these programs, including substance abuse treatment and sex offender treatment, have consistently demonstrated success in decreasing recidivism. CBT programs also tend to yield an impressive ROI. CBT programs had one of the highest ROIs in Aos and Drake's (2013) cost-benefit analyses. CD treatment in Minnesota, which is delivered within a cognitive-behavioral framework, accounted for approximately 60 percent of the overall cost-avoidance benefits produced by MnDOC programs (Duwe, 2013a).

Second, social support interventions have also shown success in decreasing misconduct, reducing recidivism, and producing cost-avoidance benefits but have arguably been underused in U.S. correctional systems. Programming that increases prosocial sources of support warrants greater attention as a correctional intervention, not only because of its demonstrated efficacy in reducing recidivism, but also because of its potential cost effectiveness. Compared with other correctional programs, interventions that focus primarily on increasing social support for offenders are generally less costly to operate. For example, programs such as CoSA and IFI have relatively low operational costs because they rely heavily on volunteers from the community. Similarly, efforts to promote greater visitation in correctional facilities (e.g., revising institutional policies to make them more visitor friendly, implementing video visitation, etc.) are relatively low-cost strategies that could yield significant public safety benefits. As a result of recent research findings, visitation has increasingly been recognized as a way to reduce recidivism but is not yet widely considered to be a "correctional program." If that were to change, perhaps the RNR framework might be applied to visitation,

whereby efforts would be made to provide or locate social support programming for high-risk offenders who have a high “need” for antisocial peers.

Third, education and employment programs have, on the whole, produced favorable outcomes for post-release employment and cost avoidance. The results for prison misconduct and recidivism are more modest and inconsistent, although still generally positive. When we look more closely at the different types of educational programming provided to prisoners, more recent evidence suggests that post-secondary educational programming generates better outcomes in the areas of prison misconduct and recidivism. Similarly, although the evidence is far from conclusive, research on employment interventions suggests that a continuum of employment programming may yield better outcomes than that delivered exclusively in prison or in the community.

Fourth, evidence indicates that it may be unreasonable to expect interventions designed to treat mental illness to reduce prison misconduct or recidivism. Rather, programs that address criminogenic needs and deliver a continuum of care have shown promise in producing favorable outcomes for offenders with mental disorders. Similarly, unless DV interventions begin to consistently deliver programming that targets known criminogenic needs (e.g., criminal thinking, substance abuse, and antisocial peers), this type of programming may continue to yield disappointing results. This is not to say that mental health interventions should not attempt to treat the symptoms of offenders with mental disorders or that DV programs should not also address patriarchal attitudes, but simply that programs should align with the principles of effective intervention.

Finally, despite mixed results overall, prisoner re-entry programs have shown an ability to reduce recidivism, improve

employment, and yield cost-avoidance benefits. Prisoner re-entry programs can work, but much of what distinguishes an effective re-entry program from an ineffective one remains unknown. Many of these programs attempt to provide an array of services that address multiple criminogenic needs. Because very few evaluations have measured service delivery for this treatment group relative to the control or comparison group, it is unclear whether the inconsistent results are due to a failure by some programs to give more, or better, services to participants in the re-entry program.

## Conclusion

Several areas warrant additional research to further advance our understanding of institutional programming and its implications for correctional systems in the U.S. First, the “what works” literature has, by and large, used recidivism as the lone metric to determine program performance. As suggested by this review, other metrics, including prison misconduct, intermediate outcome measures such as employment or abstinence from illicit substances, and cost avoidance should also be used. The use of multiple metrics provides a more complete picture of program performance. Educational programming is a case in point: Were we to rely on recidivism as the only performance metric, we would conclude that educational programming is modestly effective. When we consider other metrics, such as employment and cost avoidance, educational programming appears to be a more effective intervention that generally yields an impressive ROI.

Similarly, the use of multiple program performance metrics should include cost-benefit analyses on a more consistent basis. To be sure, measures such as prison misconduct, employment, and recidivism are critical, but cost avoidance subsumes all of these metrics and, thus, provides,

arguably, a more complete assessment of effectiveness. To illustrate, we would assume that a program that has been found to be successful in reducing recidivism is one that works. Would that assessment change if the costs to operate the program exceeded the cost-avoidance benefits it generated through reduced recidivism? Again, we might consider the program to be highly successful if we relied only on recidivism as a measure of success. When we take cost avoidance into account, we begin to see that the program may ultimately be a burden, rather than a boon, to taxpayers.

An increased emphasis on the cost effectiveness of a program would not only mean that more correctional program evaluations would assess cost avoidance, but also that a growing number of cost-benefit analyses would likely, over time, lead to insights about how to deliver correctional programming more efficiently. For example, whether a business is profitable (and to what degree) often depends on its economy of scale. In terms of cost avoidance, is the same true for correctional programs? Moreover, although violent crime is, fortunately, less common than, say, drug or property offenses, it is also much costlier to society. Are interventions that focus on reducing violent recidivism more likely to yield a better ROI? If both economy of scale and type of recidivism reduced matter, what are the implications for programs that are smaller in scale?

Second, as indicated by the review of the literature, employment, substance abuse treatment, social support, and mental health programs are more likely to produce positive outcomes when they provide a continuum of care (or service delivery) from prison to the community. Granted, an intervention must address criminogenic need(s), and it should be delivered with therapeutic integrity. But the “what works” evidence suggests that continuity of care may be another critical component. For example, among the programs reviewed

that targeted offenders’ education and employment needs, Minnesota’s EMPLOY program — the only such program that provided a continuum of service delivery from the institution to the community — yielded some of the better recidivism, employment, and cost-avoidance outcomes. Similarly, in addition to adhering to the principles of effective intervention, the MTC program and Washington’s DMIO program provided services in both the institution and the community. Future research should attempt to further clarify the extent to which a continuum of service delivery is associated with positive outcomes, particularly for the types of programming in which little or no research on continuity of care exists (e.g., employment, CBT, sex offender treatment, DV, etc.).

Third, as this review has illustrated, the “what works” movement has produced a large body of evidence on what has been effective with offenders, particularly in reducing recidivism. In shorter supply, however, is evidence that reveals why programs succeed or fail. The paucity of empirical research on the link between program integrity and recidivism is a testament to this gap. Closely connected to the scarcity of research on program integrity and recidivism is the virtual absence of studies that attempt to identify the best policies and procedures for implementing evidence-based practices. In short, while we know a lot about “what works” with prisoners, we know very little about making “what works” work. Future research should attempt to identify the most effective methods for implementing research findings within an applied correctional context.

Fourth, amid the growing consensus that some correctional programs work, a more specific question has arisen: What works best for whom, and under what circumstances? As noted earlier, research has shown that increasing the

dosage and length of treatment (up to a point) generally yields better recidivism outcomes, particularly for offenders at greatest risk of recidivism (Duwe, 2010; Lowenkamp, Latessa, & Holsinger, 2006; Sperber, Latessa, & Makarios, 2013; Wexler et al., 1990). Yet, some have argued that the sequencing of programming is also important to maximizing the benefits of effective interventions. That is, depending on risk, need, and responsivity factors, the order or timing of offenders' participation in programming may help improve recidivism outcomes. For example, Mailloux and colleagues (2003, p. 182) suggest that, "it may be useful for offenders to complete a program such as cognitive skills (which introduces basic elements associated with cognitive-behavioral therapy as well as concrete suggestions as to how to apply these principles to everyday situations) prior to completing more intensive therapeutic programs." Similarly, it may be more beneficial for prisoners to participate in an intervention toward the end of their confinement period, as opposed to the beginning of their incarceration. Future research should address whether the timing and sequencing of programming matter.

Finally, the "what works" literature consists of either individual program evaluations or meta-analyses of multiple evaluations

for a specific type of intervention (e.g., CBT, sex offender treatment, substance abuse treatment, etc.). Existing research, however, has not examined the aggregate effectiveness of programming within an entire prison system, either at the state or federal level. Moreover, very few, if any, studies have recently documented the extent to which prisoners are involved in programming while incarcerated. As a result of the scarcity of system-wide research on the effectiveness of institutional programming, future studies should address a number of important questions. For example, what percentage of prisoners participate in an intervention? To what extent does the provision of programming affect system-wide recidivism rates? Similar to the dosage issue noted above, does providing offenders with access to multiple interventions yield better outcomes? On the other hand, what is the impact of depriving inmates of programming? That is, does "warehousing" prisoners (i.e., idle offenders who do not participate in any programming) affect recidivism? By focusing on broader, system-level questions such as these, future research may be able to shed light on whether programming can influence overall recidivism rates and, if so, the level of programming resources needed to significantly drive down the rate at which prisoners reoffend.

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## About the Author

Grant Duwe is the Director of Research and Evaluation for the Minnesota Department of Corrections, where he evaluates correctional programs, develops risk assessment instruments, and forecasts the state's prison population. He holds a Ph.D. in Criminology and Criminal Justice from Florida State University.

Dr. Duwe is the author of the book *Mass Murder in the United States: A History* (McFarland and Company, Inc.), and he is a co-author (along with Michael Hallett, Joshua Hays, Byron Johnson, and Sung Joon Jang) of the recently published book, *The Angola Prison Seminary: Effects of Faith-Based Ministry on Identity Transformation, Desistance, and Rehabilitation* (Routledge). He has written more than 50 articles that have been published in peer-reviewed academic journals such as *Criminology*, *Criminology & Public Policy*, *Criminal Justice and Behavior*, and *Corrections: Policy, Practice and Research*.

Currently a visiting fellow with the Bureau of Justice Statistics and a nonresident senior fellow with Baylor University's Institute for Studies of Religion, Dr. Duwe is co-principal investigator for a project involving the development of a sexual recidivism risk assessment instrument for juvenile sex offenders.