Residential Drug Treatment for High-Risk Probationers: Evaluating the Link between Program Integrity and Recidivism[1]

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DURING THE 1970s, several prominent research reviews seemed to indicate that community corrections programs and prison-based interventions were ineffective at rehabilitating criminal offenders (Cullen, 2005; Maltz, 1984).[2] Broad reviews of research by Lipton et al. (1975) and Martinson (1974) stated that correctional programs—across the board—were incapable of reducing recidivism among offenders, including juveniles, probationers, parolees, and prison inmates. Additional social scientists of the day conducted further reviews and arrived at the same pessimistic findings, but with an additional criticism. These researchers criticized the prior evaluators whose studies had arrived at positive findings, faulting their methodologies, analyses, findings, and ultimately, even their personal motivations for undertaking these evaluations (Fienberg and Grambsch, 1979; Greenberg, 1977; Sechrest et al., 1979).

Despite these blanket criticisms of correctional programming, a few scholars reviewed the original "pro-rehabilitation" evaluations and reexamined the methodologies that led their contemporaries to arrive at the conclusion that rehabilitation was futile (Cullen, 2005; Maltz, 1984). A careful reading of the original studies, considered outside the context of the 1970s research reviews, ultimately revealed a different and less extreme set of conclusions about the utility of correctional programming. In an examination of Martinson's original study, Palmer (1975, 1978) highlighted that more than half of the studies analyzed actually had positive results and demonstrated reductions in recidivism among program participants—a point omitted from Martinson's review (Cullen, 2005; Maltz, 1984). Based on his re-analysis, Palmer advanced a more nuanced thesis, stating that although no correctional program could rehabilitate everyone, several specific correctional programs could, if delivered in a specific manner to specific offenders, reduce recidivism. Although this more practical thesis lacked the simplistic allure of a more absolute position (i.e., Tough on Crime), the precision of Palmer's reanalysis set a new research standard for a sustained inquiry into the nature of recidivism, recidivism reduction, and correctional programming (Cullen, 2005). Indeed, in subsequent research, Martinson (1979) reversed his original negative findings about correctional programming, to affirm that some treatment could reduce recidivism among specific offenders (Cullen, 2005).

The notion that specific correctional programming could reduce recidivism if tailored to specific offenders marked the beginning of an expansive period of correctional program theory and research (Cullen, 2005). Several scholars began to develop improved supervision practices and correctional programs based on research. Canadian criminologists who are now well known—Andrews, Bonta, Gendreau—built a cannon of empirical research that demonstrated the importance of focusing on criminogenic risk-need factors when supervising and providing treatment to offenders (Cullen, 2005). The Canadian School also stressed the importance of assessing program integrity in correctional programs to ensure that interventions derived from theory and were properly implemented in the field (Gendreau et al., 1999). Some American criminologists also partnered with community corrections practitioners to provide assistance to improve the quality of their supervision and treatment (Cullen, 2005).

Following the example of the Evidence-Based Practices (EBP) movement within the medical profession, criminologists developed their own EBP approach to community corrections research, referring to their growing collection of empirical studies as the "what works" research. At present, the community corrections research has identified several best practices for administering correctional programs.[3] Specifically, the "what works" correctional research indicates that correctional programs should target higher risk offenders (Andrews et al., 2006; Bonta, 2002), employ cognitive-behavioral interventions

[1] Any opinions or views expressed in this study are the author's and do not represent opinions or views held by Travis County Adult Probation, or any other agency or individual.

[2] This review summary is derived from Maltz (1984) and Cullen (2004) and is by no means intended as a historical overview.

[3] The "what works" research provides guidance for supervising people in the community, in institutional settings, and in maintaining effective court programs.

(Lowenkamp et al., 2009; Wilson et al. 2005), and tailor their service-delivery to the personalities and backgrounds of the program participants themselves (Lowenkamp et al., 2006a; Lowenkamp et al., 2006b).

Recent studies continue to indicate that correctional programs that follow the "what works" research seem to result in favorable outcomes among participants. Perez (2009) found that a treatment group of high-risk probationers who participated in a residential substance abuse program had fewer violent and property offense arrests and fewer convictions during an 18-month follow-up. The treatment group, however, did have a higher percentage of overall arrests, drug and "other" offense arrests, and incarcerations. A recent evaluation of a case management program for drug-involved women demonstrated clinical improvements over a 12-month period, but no changes in incarcerations (Guydish et al., 2008). A study of a specialized program for probationers suffering from chronic mental illness by Ashford et al. (2008) found reductions in arrests, but increased percentages of technical violations. Finally, Krebs et al. (2009) found that a correctional sample benefitted from nonresidential treatment, taking longer to recidivate than a comparison group who did not receive treatment and a group that received residential treatment. While these studies suggest that treatment programs that target high-risk or specialized offenders can reduce recidivism, the field could benefit from more discussion of how these studies ascertained the integrity of these programs to the "what works" research, especially since program implementation is often overlooked in establishing and managing a correctional program (Gendreau et al., 1999). Providing additional information about assessing program quality could provide guidance to future attempts to more precisely analyze the link between program integrity and recidivism.

The current study provides an outcome evaluation of a probation-run residential drug treatment facility in Travis County, Texas. This study is important for several reasons. First, this study focuses on a program that external evaluators from the University of Cincinnati assessed using the Correctional Program Assessment Inventory (CPAI) and the Correctional Program Checklist (CPC), standardized instruments for measuring correctional programs. Second, this study uses several recidivism measures to examine the effectiveness of this program. Third, this study adds to the research that examines whether there is a connection between program integrity and recidivism outcomes.

Correctional Program Assessment Inventory (CPAI)

For many years, researchers have used the CPAI to evaluate the integrity of correctional treatment programs. The CPAI, which was created by Gendreau and Andrews in 1994, comprises 65 items that measure treatment programs along six dimensions: the implementation of the program, the initial participant assessment, the quality and type of treatment, staff training and practices, evaluation, and other characteristics of the program (Gendreau & Andrews, 1994; Lowenkamp, 2004). During site visits to correctional programs, specially trained evaluators administer the CPAI, filling out the instrument as they analyze official program documents, conduct staff and participant interviews, and complete on-site observations of the program in action. Ultimately, the CPAI evaluator assigns each of the six program dimensions a percentage score that falls into one of the following categories: very satisfactory (70 percent +), satisfactory (60-69 percent), needs improvement (50-59 percent), or unsatisfactory (less than 50 percent). The evaluator also sums up each dimension score to arrive at an overall composite program score. Recently, evaluators have begun using the CPC, a new tool based on the CPAI, to measure the content and capacity of correctional programs. While the CPC differs from the CPAI in a few ways—there are variations in the assessment dimensions, items, and percentage scoring designations—this tool captures program integrity along largely similar criteria.

By creating a standardized scale to assess correctional program integrity, the CPAI/CPC established a foundation, a baseline, for researchers to conduct a sustained examination of what constitutes effective correctional programming. Researchers at the University of Cincinnati, for example, have conducted hundreds of CPAI assessments, primarily within the United States, and maintain a database of over 400 CPAI/CPC evaluations. Because they have a multitude of CPAI/CPC evaluations, these researchers have the ability to compare both the variety of correctional programs within the United States and the quality of these programs, based on the "what works" research. The University of Cincinnati researchers can also examine the progress of specific types of programs over time.

Several researchers have drawn on the CPAI data to analyze the link between correctional program integrity, as evaluated by the CPAI, and specific recidivism outcomes. Researchers have analyzed the CPAI in community corrections studies (Lowenkamp et al., 2006) and doctoral dissertations (Holsinger, 1999; Lowenkamp, 2004; Nesovic, 2003). The prevalent theme throughout this research emphasizes the importance of ensuring program fidelity to the tenets of EBP. In an outcome study of 97 residential and nonresidential programs previously assessed by the CPAI, Lowenkamp et al. (2006) found that treatment programs that focused on high-risk offenders and that provided longer lasting treatment, demonstrated reductions in recidivism. These findings affirm the importance of program integrity in a positive way, emphasizing the demonstrated success of a quality and research-based intervention on future criminal behavior.

This research also confirms the importance of program integrity by presenting the recidivism figures for programs that received low CPAI scores. Treatment programs that targeted low-risk offenders for a short period of time, using non-cognitive interventions, experienced increased recidivism from their participants. Lowenkamp et al. (2006) found that programs that received low CPAI scores had higher recidivism than those that received high CPAI scores. A recent evaluation conducted by Latessa et al. (2009), which examined 54 residential correctional programs that received low CPAI scores, also found increased recidivism among treatment participants compared to a non-treatment comparison group. While correctional programs with high integrity scores seem to reduce recidivism; conversely, programs with low integrity scores appear to be linked to increased criminal behavior.

SMART Program

In 1991, Travis County Adult Probation developed the SMART Program to provide residential drug treatment. The SMART Program has increasingly drawn from the "what works" research to improve the services that they deliver to their clients.[4] For

[4] At Travis County Adult Probation, the focus on the connection between program integrity and recidivism outcomes occurs within a context of EBP. Beginning in the fall of 2005, the Department began to change several dimensions of their organization to implement EBP (i.e., developing a new risk-need assessment diagnostic process, revamping supervision practices to focus on probationers' risk-need factors and officer-probation supervision plans,

the past decade, for example, the SMART Program has used a cognitive-behavioral approach to provide drug treatment services to men and women in a residential setting, with an aftercare component for successful graduates (Shaffer & Thompson, 2008; Travis County Adult Probation, 2009). The SMART Program, which provides treatment services to high-risk felony and, in some cases, misdemeanor probationers, lasts an average of 11 months (including both residential and continuing care). Outside evaluators have played an important role in improving the SMART Program. Researchers from the University of Cincinnati have evaluated SMART three times using the CPAI/CPC from 1999 thru 2008 (Latessa, 2002; Latessa, 1999; Shaffer & Thompson, 2008). During the three assessments, the SMART Program has earned high scores in each of the dimensions, as well as the composite score, and over time, has made improvement in select program dimensions (see Table 1).

Guided by the correctional program research, which suggests that programs that target high-risk clients using a cognitive approach tailored to their clients' personal characteristics can reduce recidivism (Lowenkamp et al., 2006), this research focuses on correctional outcomes. Since the CPC assessment most recently identified the SMART Program as a highly effective program, the current study hypothesized that successful SMART participants would have lower recidivism compared to probationers who did not receive treatment. Specifically, this research hypothesized that successful SMART completers would have fewer arrests and probation revocations than a comparison group.

and developing the capacity to use official administrative records as data to evaluate their progress). The Travis County Adult Probation website has more information about this process, documented in several official reports and articles: http://www.co.travis.tx.us/community_ supervision/default.asp

Methods

Participants

This study used a treatment and comparison group to examine 1,048 Travis County Adult Probationers. The treatment cases include all probationers (N = 554) who successfully completed the SMART Program for three fiscal years (2006-2008).[5] The present analysis omits unsuccessful SMART discharges, which include those who absconded from treatment, who staff deemed to be inappropriately placed in the facility, who had their probation revoked while in SMART, and who committed program violations that resulted in their expulsion from SMART.[6]

This study excluded the unsuccessful SMART discharges for two reasons.[7] Prior evaluations of correctional programs have focused on participants who received the full dosage of the expected treatment regiment, as opposed to a percentage of the treatment (Lowenkamp & Latessa, 2004). Drawing on a medical analogy, Lowenkamp and Latessa (2004) succinctly argued in favor of only including successful correctional program completers because those who do not complete treatment have not received the full dosage of treatment:

> We would not expect medical treatments to be as effective if a participant dropped out of the treatment halfway through an experimental trial. Likewise, we would not expect a correctional intervention to be as effective when an offender is only exposed to half of the treatment (p. 507)

Similarly, the present study is interested

TABLE 1
SMART Correctional Program Assessment Inventory / Correctional Program Checklist Assessments

Correctional Program Assessment Inventory	August 1992	January 2002
Overall Score	**61.8**	**67.1**
- Implementation	71.4	85.2
- Assessment	58.3	83.0
- Treatment	61.5	53.8
- Staff	54.5	72.7
- Evaluation	42.8	28.4
- Other	83.3	83.3

very satisfactory = 70% or higher
satisfactory = 60% - 69%
needs improvement = 50% - 59%
unsatisfactory = less than 50%

Correctional Program Checklist	November 2008
Overall Score	**70.7**
- Leadership	71.4
- Staff	72.7
- Assessment	100.0
- Treatment	58.8
- Quality Assurance	62.5
- Capacity	69.7
- Content	71.4

highly effective = 65% - 100%
effective = 55% - 64%%
needs improvement = 46% - 54%
ineffective = less than 46%

[5] The fiscal year for Travis County Adult Probation begins 1 September and ends 31 August. The fiscal year for 2006, for example, started on 1 September 2005 and ended on 31 August 2006. Every adult probation agency in Texas uses the same dates for their fiscal year.

[6] Although most successful SMART participants went through the program a single time, a few probationers completed the residential program after enrolling in the residential treatment a second time. For these few probationers, we coded their second discharge date from SMART as their fiscal year of discharge. Because this analysis focused on individuals on probation as the unit of analysis, rather than the probation case, we excised the first SMART discharge for probationers who completed SMART after a second try.

[7] The unsuccessful SMART discharges represent only a small percentage of discharges for the fiscal years 2006-2008. Of 673 discharges, 83.1% discharged successfully, 7.6% absconded, 2.8% were discharged as inappropriate placements, and 6.5% were discharged for violations. The percentage of unsuccessful SMART discharges is relatively constant over the three-year period.

in the effectiveness of the full SMART treatment—the benefit the probationer accrues upon successfully completing the program—over an 18-month follow-up period.

This study also excluded the unsuccessful program discharges because, on a conceptual level, it is complicated to create an appropriate follow-up period for these probationers. This study would have had to distinguish between unsuccessful discharges who participated in SMART for only a few days compared to those who had spent a month or longer in the program. Prior research has also noted the additional complication that it is difficult to devise a follow-up time for unsuccessful correctional program participants because, as a result of their unsuccessful treatment, they often find themselves sentenced to a more restrictive environment such as prison (Lowenkamp & Latessa, 2004). For similar reasons, this research omitted unsuccessful SMART probationers who absconded or who found themselves sentenced to correctional facilities. Finally, this research omitted the small percentage of probationers who found themselves unsuccessfully discharged from SMART as inappropriate placements. These probationers often had committed no violations, but suffered from physical or psychological health issues that made them unable to participate in the SMART residential program.

To construct the comparison group, this study began with a sampling frame of all Travis County adult probation placements for fiscal years 2006-2008. This study removed any probationers from the sampling frame who had previously entered the SMART Program.[8] Next, this study removed any probationers who had committed an enhanced or aggravated felony offense, since these offenses automatically bar probationers from admission into the SMART Program. This study then focused on the people in the sampling frame who had multiple probation cases to ensure that they were not selected multiple times for the comparison group. In instances where people had multiple probation cases, this study selected the most recent case based on the probation date, and eliminated the remaining cases. If the individual began his or her probation sentence for multiple probation cases on the same date, this study selected the most serious case based on the criminal charge and eliminated the remaining cases.

To create the actual comparison group, this study conducted a one-for-one match with the SMART Program treatment group across seven individual-level variables. This study matched the treatment and comparison group on gender, race-ethnicity, offense degree (felony, felony-reduced, misdemeanor), offense category (violent, DWI, drug, property, other), and start year (fiscal year). For the treatment group, the start year is the fiscal year that the SMART Program successfully discharged the probationer. For the comparison group, the start year is the fiscal year the probationer began his/her community supervision term. This study also matched the treatment and comparison groups on two time-sensitive variables: age range at probation start date (17 thru 21, 22 thru 25, 26 thru 30, 31 thru 40, 41 thru 50, 51+) and composite risk assessment score (maximum, medium, minimum) at probation start date. Ultimately, this study was unable to create an equal number of one-for-one matches for our SMART completers, which resulted in a slightly smaller comparison group. Prior evaluations of correctional programs, however, have established a precedent for using smaller comparison groups (Lowenkamp & Latessa, 2004; Lowenkamp et al., 2010).

Measures

This study used an 18-month follow-up time to track the treatment and comparison groups for potential recidivism events. The beginning of the 18-month period for the SMART completers started on the probationer's residential treatment discharge date, when he or she began to live independently in the community, supervised by a field officer. The start date for the comparison group began on the date the probationer started his or her community supervision term.

The current study used arrest and probation data to examine recidivism events for each group. This study submitted the probationers' State Identification Numbers (SIDs) to the Texas Department of Public Safety (DPS) to obtain arrest data. Using the SID, DPS provided criminal arrest histories for the probationers. A limitation of Texas DPS arrest data is that they generally exclude out-of-state arrests. If a probationer leaves the state, offends, and is arrested—it is quite possible that the arrest will not appear in these DPS arrest data. From the arrest data, this study created two dummy coded arrest variables: arrested at least once (0 = no arrest; 1 = at least one arrest) and multiple arrests (0 = at most one arrest; 1 = at least two arrests).

This study used Travis County Adult Probation data to analyze revocation outcomes among these probationers. This study dummy coded the revocation data three ways: technical violations (0 = no technical violation revocation; 1= revoked for technical violation), new offense revocations (0 = no new offense revocation; 1= revoked for new offense), and any revocation (0 = not revoked; 1= revoked). This study also developed a variable to capture any type of recidivism, arrest and/or revocation (0 = no recidivism; 1= recidivism).

This study also created dichotomous dummy-coded variables for the independent variables. These variables include group (0 = SMART completers; 1 comparison group); age (0 = 17-30; 1 = 31+), gender (0 = female; 1 = male), race-ethnicity (0 = nonwhite; 1 = white), offense degree (0 = misdemeanor; 1 = felony), fiscal start year 2006 (0 = no; 1 = FY 2006) , fiscal start year 2007 (0 = no; 1 = FY 2007) , fiscal start year 2008 (0 = no; 1 = FY 2008), and risk score (0 = non-high-risk; 1 = high-risk). This study also developed the following five dummy variables to capture the probationer's original offense: violent (0 = non-violent, 1 = violent), DWI (0 = non-DWI, 1 = DWI), drug (0 = non-drug, 1 = drug), property (0 = non-property, 1 = property), and other (0 = non-other, 1 = other).

Analysis

This study ultimately conducted several analyses to examine potential differences between the SMART treatment and control groups. First, this study conducted multiple chi-square analyses on the original demographic, risk, and criminal history variables used to match the treatment and comparison group, as well as the dummy-coded dichotomous variables created for additional analyses. Second, this study conducted a chi-square analysis for each recidivism measure to determine whether the percentage differences between the two groups rose to the level of statistical significance. Third, this research conducted six bivariate analyses—each recidivism measure served as a dependent variable in a separate model—to examine whether there were statistically significant differences between the SMART completers and the comparison group. Finally, this study conducted six logistic regressions—each of the six recidivism measures served as a dependent variable in a distinct model—to control for any treatment and comparison group variations that might arise due to differences in demographics, risk scores, and criminal offense variables.

[8] We also checked to make sure that none of these probation placements later entered SMART during fiscal years 2009 and 2010.

TABLE 2
Study Descriptives, Variables, and Chi-Square Analyses

Variables		Treatment (N = 559)	Comparison (N = 489)
Race-Ethnicity	- African-American	17.7%	17.2%
	- Asian	0.2%	0.0%
	- Caucasian	46.7%	46.0%
	- Hispanic	34.7%	36.8%
	- Other	0.7%	0.0%
Age Range	- 17 thru 21 years	8.9%	10.0%
	- 22 thru 25 years	19.0%	20.2%
	- 26 thru 30 years	18.2%	19.8%
	- 31 thru 40 years	26.3%	25.4%
	- 41 thru 50 years	20.8%	19.2%
	- 51 or older	6.8%	5.3%
Offense Degree	- Felony	94.3%	94.3%
	- Felony-Reduced	1.3%	1.2%
	- Misdemeanor	4.5%	4.5%
Offense Category	- Violent (no sex)	3.0%	3.3%
	- Drug	46.7%	49.1%
	- DWI	27.7%	24.5%
	- Property	14.3%	16.2%
	- Other	8.2%	7.0%
Closest Risk Score ^	- Maximum	85.8%	85.7%
	- Medium	13.9%	14.1%
	- Minimum	0.4%	0.2%
	- Missing	25	21
Dependent Variables			
** Arrest	- 1 = Yes	25.9%	36.2%
** Arrest 2+	- 1 = Yes	11.1%	17.0%
* Technical Revocation	- 1 = Yes	14.3%	10.0%
** New Offense Revocation	- 1 = Yes	10.6%	16.2%
Revocation	- 1 = Yes	24.9%	26.2%
* Any Recidivism	- 1 = Yes	37.4%	44.4%
Independent Variables			
Sex % Female	- 1 = Yes	18.1%	15.5%
Race-Ethnicity % Caucasian	- 1 = Yes	53.3%	54.0%
Age % 31+	- 1 = Yes	53.8%	49.9%
Offense Degree % Felony	- 1 = Yes	94.3%	94.3%
Offense % Violent	- 1 = Yes	3.0%	3.3%
Offense % Drug	- 1 = Yes	46.7%	49.1%
Offense % DWI	- 1 = Yes	27.7%	24.5%
Offense % Property	- 1 = Yes	14.3%	16.2%
Offense % Other	- 1 = Yes	8.2%	7.0%
Initial Risk % Maximum	- 1 = Yes	81.9%	82.0%
Start % FY 2006	- 1 = Yes	33.8%	34.8%
Start % FY 2007	- 1 = Yes	33.5%	33.7%
Start % FY 2008	- 1 = Yes	32.7%	31.5%

*** p < .01*
** p < .05*
^ Missing risk score-probationers excluded from base.

Results

Table 2 shows the results of the chi square analysis of the original and dummy-coded variables used to match the probationers of both groups. Despite the smaller number of comparison group probationers, these groups closely resemble one another and there are no statistically significant differences between the two.

The Table 2 results also include the chi-square recidivism analysis for the SMART completers and the comparison group. Consistent with prior evaluations of correctional treatment programs that received high composite scores on the CPAI, the SMART Program probationers had a smaller percentage of new arrests, multiple arrests, new offense revocations, and overall instances of general recidivism. Contrary to initial expectations, however, the SMART Program probationers had a higher percentage of revocations for administrative violations than the comparison group. This higher percentage of administrative violations also impacted the percentage of overall revocations for the SMART completers, increasing the overall percent of revocations. Although the SMART completers had a slightly smaller percentage of revocations than the comparison group, this difference did not rise to the level of statistical significance.

This study also conducted six bivariate analyses of the various recidivism measures on the group variable, which distinguished between the SMART treatment participants and the comparison group probationers. These analyses, which appear in Table 3, reveal significant differences between the groups for several recidivism measures, with the comparison group being statistically more likely to be rearrested at least once, arrested multiple times, to be revoked for a new offense, and to commit any type of recidivism. At the same time, this bivariate analysis revealed that the comparison group was statistically less likely than the treatment group to be revoked for a technical revocation. The next question this research examined was whether some other demographic, risk score, or offense history variable might be accounting for these group differences.

In Table 4, this study presents the results of the six logistic regressions for the SMART Program probationers and the comparison group. The differences in recidivism between the SMART completers and the comparison group remain statistically significant, while controlling for demographics, risk scores,

and criminal offense variables. For these six logistic models, this study omitted fiscal year 2006 as a comparison group for start year and violent offense as a comparison group for offense type. Examining the logistic regression models reveals that compared to the SMART completers, comparison group probationers were 60 percent more likely to be arrested at least once, 58 percent more likely to be arrested multiple times, 58 percent more likely to be revoked for a new offense, and 30 percent more likely to engage in general

TABLE 3
Bivariate Analyses

	Model 1. Any Arrest			Model 2. Arrest 2+			Model 3. Technical Revocation		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Group	0.48**	0.14	1.62	0.49**	0.18	1.64	-0.41*	0.19	0.67
	Model 4. New Offense Revocation			Model 5. Revocation			Model 6. Any Recidivism		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Group	0.49**	0.19	1.63	0.07	0.14	1.07	0.29*	0.13	1.34

** p < .01
* p < .05

TABLE 4
Logistic Regression Models 1-6 Using all Probationers (N = 1,048)

	Model 1. Any Arrest			Model 2. Arrest 2+			Model 3. Technical Revocation		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Group	0.47**	0.14	1.60	0.46**	0.19	1.58	-0.44*	0.20	0.64
FY 2007	0.21	0.18	1.24	0.18	0.23	1.19	-0.45*	0.23	0.64
FY 2008	0.24	0.18	1.27	0.12	0.24	1.13	-0.73**	0.25	0.48
Sex	0.02	0.20	1.02	0.02	0.26	1.02	0.52*	0.24	1.69
Race-Ethnicity	-0.50**	0.15	0.61	-0.49**	0.19	0.61	0.00	0.20	1.00
Offense-Degree	0.07	0.34	1.07	-0.29	0.45	0.75	-0.73	0.43	0.48
Risk	0.51**	0.21	1.66	0.60*	0.30	1.83	1.27**	0.35	3.54
Age	-0.90**	0.15	0.41	-0.59**	0.20	0.56	0.49*	0.20	1.63
Drug Offense	-0.15	0.39	0.86	0.56	0.56	1.76	-0.23	0.52	0.79
DWI Offense	-1.11**	0.41	0.33	-0.81	0.62	0.45	-1.35*	0.57	0.26
Other Offense	-0.47	0.45	0.62	0.17	0.63	1.19	-0.35	0.61	0.71
Property offense	-0.08	0.41	0.92	0.63	0.58	1.87	0.24	0.54	1.27
Constant	-0.69	0.53	0.50	-2.24	0.75	0.11	-1.82	0.72	0.16
	Model 4. New Offense Revocation			Model 5. Revocation			Model 6. Any Recidivism		
	B	SE	Exp(B)	B	SE	Exp(B)	B	SE	Exp(B)
Group	0.46*	0.19	1.58	0.03	0.15	1.03	0.26*	0.13	1.30
FY 2007	0.41	0.23	1.50	-0.02	0.18	0.98	0.03	0.16	1.03
FY 2008	0.28	0.25	1.32	-0.27	0.19	0.77	-0.06	0.17	0.94
Sex	-0.02	0.26	0.98	0.31	0.19	1.37	0.19	0.18	1.21
Race-Ethnicity	-0.51**	0.20	0.60	-0.31*	0.15	0.73	-0.40**	0.14	0.67
Offense-Degree	0.29	0.50	1.34	-0.27	0.35	0.76	-0.11	0.31	0.90
Risk	0.49	0.30	1.64	0.95**	0.24	2.58	0.77**	0.19	2.16
Age	-0.64**	0.21	0.53	-0.09	0.16	0.91	-0.56**	0.14	0.57
Drug Offense	-0.09	0.49	0.92	-0.19	0.39	0.82	-0.13	0.37	0.88
DWI Offense	-1.07*	0.55	0.34	-1.39**	0.43	0.25	-1.20**	0.39	0.30
Other Offense	-0.20	0.56	0.82	-0.32	0.45	0.73	-0.26	0.43	0.77
Property offense	-0.02	0.51	0.98	0.13	0.41	1.14	0.05	0.40	1.05
Constant	-2.31	0.74	0.10	-1.04	0.55	0.35	-0.25	0.50	0.78

** p < .01
* p < .05

recidivism. Although the odds of each recidivism is a few percentage points less than they were in the bivariate analyses, indicating that the size of these percentage differences are affected by the control variables as well, the odds still remain high. Other statistically significant predictors of these various recidivism measures include sex, race-ethnicity, risk, age, and offense type.

Discussion

This study of the SMART Program examines the link between correctional program integrity and recidivism outcomes. Specifically, the SMART Program sought to improve their fidelity to EBP and the "what works" research by having external researchers administer the CPAI/CPC on their program. Following the CPAI, the SMART Program focused on improving the integrity of their program, and appear to have successfully strengthened the majority of areas that prior CPAI evaluations identified as areas in need of improvement, as reflected in the most recent CPC assessment in November 2008. To test whether high measures of program integrity correlated with reductions in recidivism, this study analyzed three fiscal years of successful SMART discharges against a comparison group. Over an 18-month follow-up period, the SMART completers had a smaller percentage of probationers who were arrested one or more times, arrested multiple times, revoked as a result of a new offense, revoked, and who had committed some type of recidivism.

It is important to emphasize that although this study draws on different data sources, each analysis of each data source, when considered alone, suggests that the SMART Program is an effective residential program. Evaluators from the University of Cincinnati evaluated the SMART Program in November 2008 for content and capacity along several programmatic dimensions and assessed an overall score of 70.7 percent, placing the program into their "Highly Effective" category (Shaffer & Thompson, 2008). Out of the over 400 correctional programs the University of Cincinnati researchers have evaluated using the CPAI/CPC, only about 7 percent have earned a "Highly Effective" composite score (Shaffer & Thompson, 2008). At the same time, this study also draws on different data to test whether the SMART Program affected recidivism outcomes. This study drew on an independent data source—DPS arrest records from the State of Texas—to examine arrest incidents for an 18-month follow-up period. This analysis found that SMART participants, compared to the comparison group, were less likely to be rearrested one or more times and also less likely to have multiple arrests. This study analyzed an additional data source, Travis County Adult Probation data, and found slight decreases in overall revocations and larger decreases in revocations for new offenses. The use of several different sources of data allows for more confidence in the finding that the SMART Program is an EBP correctional program that appears to reduce future recidivism.

This study is also important because it tracks the SMART treatment and control groups across a variety of recidivism measures. The inclusion of multiple recidivism measures provides a broader context to examine, with greater specificity, the types of offending that occurring during the 18-month follow-up period. This study suggests that it is important to distinguish between different measures of new arrest, specifically one or more arrests and multiple arrests. In some cases, examining if a specific group is arrested one or more times provides limited information about the recidivism of the probationers. This measure, for example, does not differentiate between people who are arrested only once and those who are arrested multiple times. A single arrest may reflect some other social phenomena besides someone merely recidivating. It is possible that a police officer might have arrested the probationer by mistake, as a result of a mistaken identity or perhaps even a clerical error, such as a warrant that has yet to be administratively closed even though the person has taken care of his or her obligations. A single arrest may also not be the most accurate measure of recidivism if some probationers face a greater risk of being arrested due to their socio-economic status, demographic characteristics, or residential neighborhood. To provide additional information on arrest as a recidivism measure, we examined those probationers who were arrested two or more times, allowing us to identify those people who were apprehended for engaging in recidivating behavior on more than a single occurrence.

This study also separately studied technical offense and new arrest revocations. It is important to distinguish between revocation types because officer discretion can play a larger role in technical revocations. Compared to new offense revocations, technical revocations often involve a probationer violating an administrative rule. Therefore, in a technical revocation, it is possible that an officer might take enforcement action against a probationer based on extralegal reasons that do not necessarily involve the probationer reoffending. The officers may also supervise the probationer more closely, or take more punitive action in response to specific violations, because he or she committed violations prior to the SMART Program or because he or she was in residential treatment. With this in mind, it might be more accurate to characterize a technical revocation as a combined measure of officer behavior and probationer behavior, rather than a measure of recidivism per se.

As with any study, this evaluation has limitations that might ultimately call into question the overall results. First, this evaluation does not adhere to the gold standard of social science research—this study does not have a traditional experimental design where researchers randomly assigned participants into either a treatment or control group. In creating our comparison group, it is possible that we created two different probationer groups that differed from one another, and that these differences impacted our probationer outcomes. We attempted to address this issue by matching the probationers from each group case-by-case across seven variables, including those specific variables that research has found to impact recidivism (i.e., composite risk score, gender, age range) and examining if there were statistically significant differences between the groups based on these characteristics.

Another weakness of the current study is that it lacks an equal number of one-for-one matched comparison probationers; this study relied on a comparison group that was slightly smaller than the treatment group. This should not impact the accuracy of the study. On the contrary, the decision to match these two groups on seven caseload variables, which reduced the number of comparison group participants, ultimately enhanced the similarities between these two groups.

Ultimately, this study suggests a possible approach for corrections professionals and funding agencies to use when they wish to determine if a correctional program is a sound investment. When funders and administrators find themselves having to make hard choices about which programs to invest in and which programs to defund, this evaluation demonstrates a way for them to make informed decisions based on peer-reviewed research and actual program-specific data. Specifically, this analysis presents three sources of data—the

CPAI/CPC assessments, Travis County Adult Probation revocation data, and Texas DPS arrest data—that indicate that the SMART Program seemed to reduce new arrests, multiple arrests, revocations for new offenses, revocations, and general recidivism in contrast to a comparison group.

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References

Andrews, D. A., Bonta, J., & Wormith, S. (2006). The recent past and near future of risk and/or need assessment. *Crime and Delinquency,* 52:7-27.

Ashford, J. B., Wong, K. W., & Sternbach, K. O. (2008). Generic correctional programming for mentally ill offenders: A pilot study. *Criminal Justice and Behavior, 35:* 457-473.

Bonta, J. (2002). Offender risk assessment: Guidelines for selection and use. *Criminal Justice and Behavior*, 29:355-379.

Cullen, F. T. (2005). The twelve people who saved rehabilitation: How the science of criminology made a difference. The American Society of Criminology 2004 Presidential Address. *Criminology*, 43:1-42.

Fienberg. S., & Grambsch, P. (1979). Appendix: An assessment of the accuracy of the effectiveness of correctional treatment. In L. Sechrest, S. D. White, and E. D. Brown, (Eds.), *The rehabilitation of criminal offenders: Problems and prospects* (119-147). National Academy of Sciences, Washington, D.C.

Gendreau, P., & Andrews, D. A. (1994). *The correctional program assessment inventory*. St. John, Canada: University of New Brunswick and Carleton University.

Gendreau, P., Goggin, C., & Smith, P. (1999). The forgotten issue in effective correctional treatment: Program implementation. *International Journal of Offender Therapy and Comparative Criminology, 43:* 180-187.

Greenberg, D. F. (1977). The correctional effects of corrections: A survey of evaluations. In D. F. Greenberg, (Ed.), *Corrections and punishment* (111-148). Sage, Beverly Hills. California.

Guydish, J., Chan, M., Bostrom, A., Jessup, M. A., Davis, T. B., & Marsh, C. (2008). A randomized trial of probation case management for drug-involved women offenders. *Crime and Delinquency, 20:* 1-30.

Holsinger, A. M. (1999). *Opening the 'black box': Assessing the relationship between program integrity and recidivism*. The University of Cincinnati: Doctoral Dissertation.

Krebs, C. P., Strom, K. J., Koetse, W. H., & Lattimore, P. K. (2009). The impact of residential and nonresidential drug treatment on recidivism among drug-involved probationers: A survival analysis. *Crime and Delinquency, 55:* 442-471.Latessa, E. J., Smith, P., Schweitzer, M., & Lovins, L. (2009). *Evaluation of selected institutional offender treatment programs for the Pennsylvania Department of Corrections. Final Report.* November. Cincinnati, OH: University of Cincinnati.

Latessa, E. J. (2002). *Final report: Correctional Program Assessment Inventory. Conducted on the SMART Program.* Assessment November 15, 2001. November 15. Cincinnati, OH: University of Cincinnati.

Latessa, E. J. (1999). *Final report: Correctional Program Assessment Inventory. Conducted on the SMART Program*. Assessment April 17, 1999. August 18. Cincinnati, OH: University of Cincinnati.

Lipton, D., Martinson, R., & Wilks, J. (1975). *The effectiveness of correctional treatments: A survey of treatment evaluation studies.* Praeger, New York.

Lowenkamp, C.T. 2004. *A program level analysis of the relationship between correctional program integrity and treatment effectiveness*. The University of Cincinnati: Doctoral Dissertation.

Lowenkamp, C. T., Hubbard, D., Makarios, M. D., & Latessa, E.J. (2009). A quasi-experimental evaluation of thinking for a change: A "real-world" application. *Criminal Justice and Behavior, 36:* 137-146.

Lowenkamp, C. T., & Latessa, E. J. (2004). Increasing the effectiveness of correctional programming through the risk principle: Identifying offenders for residential placement. *Criminology and Public Policy, 4:* 263-290.

Lowenkamp, C. T., Latessa, E. J., & Holsinger, A. M. (2006). The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime and Delinquency, 57:* 1-17.

Lowenkamp, C. T., Makarios, M. D., Latessa, E. J., Lemke, R., & Smith, P. (2010). Community corrections facilities for juvenile offenders in Ohio: An examination of treatment integrity and recidivism. *Criminal Justice and Behavior, 37:* 695-708.

Maltz, M. D. ([1984] 2001). *Recidivism*. Originally published by Academic Press, Inc., Orlando, Florida. Internet edition available at http://www.uic.edu/depts/lib/forr/pdf/crimjust/ recidivism.pdf

Martinson, R. (1974). What works? Questions and answers about prison reform. *The Public Interest,* Spring, 22-54.

Martinson, R. (1979). New findings, new views: A note of caution regarding sentencing reform. *Hofstra Law Review,* 7:243-258.

Nesovic, A. (2003). *Psychometric evaluation of the Correctional Program Assessment Inventory (CPAI)*. Carleton University: Doctoral Dissertation.

Perez, D. M. (2009). Applying evidence-based practices to community corrections supervision: An evaluation of residential substance abuse treatment for high-risk probationers. *Journal of Contemporary Criminal Justice, 25:* 442-458.

Palmer, T. (1975). Martinson revisited. *Journal of Research in Crime and Delinquency* 12, 133-152.

Palmer, T. (1978). *Correctional Intervention and Research: Current Issues and Future Prospects.* Lexington Books, Lexington, Massachusetts.

Shaffer, D. K., & Thompson, C. (2008). *Final report: Evidence-based correctional program checklist (CPC). SMART Program.* October 23 & 24. Cincinnati, OH: University of Cincinnati.

Sechrest, L., White, S. O., & Brown E.D. (Eds.). (1979). *The rehabilitation of criminal offenders: Problems and prospects.* National Academy of Sciences Press, Washington, D. C.

Travis County Adult Probation. (2009). *Community justice plan for FY 2010-2011.*

Wilson, D. B., Bouffard, L. A., & MacKenzie, D. L. (2005). A quantitative review of structured, group-oriented, cognitive-behavioral programs for offenders. *Criminal Justice and Behavior, 32*: 172-204.