ARTICLE

WHAT WORKS IN REDUCING RECIDIVISM?

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THE PRINCIPLES OF EFFECTIVE INTERVENTION

Over the past several decades, scholars in corrections have focused increased attention on studying the effectiveness of correctional interventions and sanctions. There is now a substantial body of research on the effectiveness of correctional interventions in reducing recidivism. This research has led to the identification of some key findings, summarized as the "principles of effective intervention." These principles form the conceptual and empirical underpinnings for understanding this body of research, and this article summarizes them. Additionally, findings from two large-scale studies of correctional programs, conducted in Ohio, will be presented. These findings will demonstrate that the key is no longer simply identifying what works, but instead determining what conditions and characteristics of programs are associated with the greatest effectiveness. The research reported in this article helps to summarize some of the key characteristics correctional programs need to follow to have substantive impacts on the recidivism rates of the offenders they serve.

Most researchers who have studied correctional interventions have concluded that without some form of human intervention or services there is unlikely to be a significant effect on recidivism from punishment alone. While evidence from a large body of research demonstrates that treatment is more effective in reducing recidivism than punishment alone, not all treatment programs are equally effective. This research is collectively known as the "what works" literature.

"What works" is not a program or an intervention, but a body of knowledge based on over thirty years of research that has been conducted by numerous scholars across North America.[1] Also referred to as "evi-

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1. *See generally* D.A. Andrews, Ivan Zinger, Robert D. Hoge, James Bonta, Paul Gendreau & Francis T. Cullen, *Does Correctional Treatment Work? A Clinically Relevant and Psychologi-*

dence-based practice," the "what works" movement demonstrates empirically that recidivism rates can be significantly reduced through theoretically sound, well-designed programs that appropriately apply the principles of effective intervention. Through the review and analysis of hundreds of studies, researchers have identified a set of principles that should guide correctional programs. Known as the "principles of effective intervention," they can be summarized as risk, need, treatment, and fidelity.

Risk Principle

The first principle is the risk principle, or the "who" to target. This principle states that our most intensive correctional treatment and intervention programs should be reserved for high-risk offenders. "Risk" in this context refers to those offenders with a higher probability of recidivating, while low-risk offenders are those who generally display pro-social attributes and have a low chance of recidivating. One way to think of the distinction is to consider risk factors. Who is at high-risk for continued criminal conduct—one who minimizes his or her criminal behavior, hangs around with others who get into trouble, acts impulsively, never finishes high school, and has difficulty maintaining employment; or one who accepts responsibility for his or her actions, has friends who avoid trouble, finishes school, and is gainfully employed? Clearly the former is at greater risk for continued criminal behavior and has a greater need for intervention, while the latter is unlikely to re-offend.

Squandering our scarce correctional treatment program resources on low-risk offenders that do not need them is a waste of those resources. More importantly, research has clearly demonstrated that when we place low-risk offenders in our more intense programs, we often increase their failure rates (and thus reduce the overall effectiveness of the program).[2] There are several reasons this occurs. First, placing low-risk offenders in with high-risk offenders may lead to an "education" in anti-social behavior for the low-risk offender. For example, let's say that your teenage son or daughter did not use drugs, but got into some trouble with the law. Would you want him or her in a program or group with heavy drug users? Of course not, since it is more likely that the high-risk youths would influence

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cally Informed Meta-Analysis, 29 Criminology 369 (1990); Paul Gendreau, *The Principles of Effective Intervention With Offenders,* in *Choosing Correctional Options That Work: Defining the Demand and Evaluating the Supply*, 117 (Alan T. Harland ed., Sage Publications 1996).

2. Christopher T. Lowenkamp & Edward J. Latessa, *Understanding the Risk Principle: How and Why Correctional Interventions Can Harm Low-Risk Offenders*, Topics in Community Corrections 3, 6 (2004); Christopher T. Lowenkamp & Edward J. Latessa, *Increasing the Effectiveness of Correctional Programming Through the Risk Principle: Identifying Offenders for Residential Placement*, 4 (2) Criminology and Pub. Policy 263, 277 (2005) [hereinafter Lowenkamp, *Increasing the Effectiveness*]; Christopher T. Lowenkamp, Edward J. Latessa & Alexander M. Holsinger, *The Risk Principle in Action: What Have We Learned From 13,676 Offenders and 97 Correctional Programs?* 52 (1) Crime and Delinquency 77, 89 (2006).

your child more than the other way around. Second, placing low-risk offenders in these programs also tends to disrupt their pro-social networks; in other words, the very attributes that make them low-risk become interrupted, such as school, employment, family, and so forth. Remember, these characteristics (e.g., school performance, employment, lack of substance abuse, pro-social friends, and good family relationships) are what define low-risk offenders. Of course, low-risk offenders may require some intervention (they did break the law after all); however, simply holding them accountable for their actions, and imposing some minimal sanction is usually sufficient to prevent recidivism.

Need Principle

The second principle is referred to as the need principle, or the "what" to target. The need principle states that programs should target crime-producing needs (i.e., criminogenic factors) such as anti-social peer associations, anti-social personality traits, substance abuse, lack of problem-solving and self-control skills, anti-social attitudes, values and beliefs, and other factors that are highly correlated with criminal conduct.[3]

Programs need to ensure that the vast majority of their interventions are focused on these factors. Non-criminogenic factors such as self-esteem, physical conditioning, understanding one's culture or history, and creative abilities will not have much effect on reducing criminal conduct, since these factors have not been found to be highly correlated with criminal behavior. An example of a program that tends to target non-criminogenic factors can be seen in offender-based, military-style boot camps. These programs tend to focus on non-criminogenic factors, such as drill and ceremony, physical conditioning, discipline, self-esteem, and bonding offenders together. Because they tend to focus on non-crime-producing needs, most studies show that boot camps have little impact on future criminal behavior,[4] and may in fact increase failure rates since they often model aggressive behavior and bond criminal and delinquent groups together, which is something that should be avoided with this population.

Treatment Principle

The third principle is the treatment principle, and tells us "how" to go about targeting offenders' needs. This principle states that the most effective programs are behavioral in nature. Behavioral programs have several attributes. First, they are centered on the *present* circumstances and risk

3. D.A. Andrews, James Bonta & J. Stephen Wormith, *The Recent Past and Near Future of Risk and/or Need Assessment*, 52 (1) Crime and Delinquency 7, 11 (2006) [hereinafter Andrews, *The Recent Past*].

4. Doris Layton Mackenzie, David B. Wilson & Suzanne B. Kider, *Effects of Correctional Boot Camps on Offending*, 578 Annals Am. Acad. Pol. & Soc. Sci. 126, 138 (2001).

factors that are responsible for the offender's behavior. For example, focusing on a past event, such as abandonment or grief counseling might be therapeutic and helpful in increasing one's understanding, but it will unlikely do much to reduce the risk of re-offending. On the other hand, changing with whom an offender associates is much more likely to assist him or her in staying out of trouble. This is not to say that past trauma cannot be a barrier to addressing anti-social behavior, but it is the current behavior that is the target for change, not the past.

Second, behavioral interventions are *action*-oriented rather than *talk*-oriented. In other words, offenders *do* something about their difficulties, rather than just *talk* about them. These types of interventions teach offenders new, pro-social skills to replace the anti-social ones they often possess (e.g., stealing, cheating, lying, etc.) through modeling, practice, increasing difficulty of the skill, and reinforcement. Examples of behavioral programs would include: structured social-learning programs where new skills are taught and behaviors and attitudes are consistently reinforced; cognitive behavioral programs that target attitudes, values, beliefs, peers, substance abuse, anger, etc.; and family-based interventions that train family members appropriate behavioral techniques. Interventions based on these approaches are very structured and emphasize the importance of modeling and behavioral-rehearsal techniques that engender self-efficacy, challenge cognitive distortions, and assist offenders in developing good problem solving and self-control skills. These strategies have been demonstrated to be effective in reducing recidivism.[5] Of course low-risk offenders can also benefit from these interventions; however, being "low-risk" usually means that one has more pro-social skills and attributes to begin with. Furthermore, it is important to remember that placing low-risk and high-risk offenders together is never a good strategy since the transmission of anti-social behavior through the learning and reinforcement process is often undesirable.

Non-behavioral interventions that are often used in programs would include drug and alcohol education, fear tactics and other emotional appeals, talk therapy, non-directive client-centered approaches, bibliotherapy (reading books), lectures, milieu therapy, and self-help. There is little empirical evidence that these approaches will lead to long-term reductions in recidivism.

Fidelity Principle

Finally, a host of other considerations will increase correctional program effectiveness and can be considered as elements of program integrity or program quality. These include targeting responsivity factors, such as a lack of motivation or other, similar barriers that can influence one's participation in a program, making sure that the program has well-trained and

5. *See* Andrews, *The Recent Past*, *supra* n. 3, at 14–17.

interpersonally sensitive staff; providing close monitoring of offenders' whereabouts and associates, assisting with other needs that the offender might have, ensuring the program is delivered as designed through quality-assurance processes, and providing structured aftercare. These program attributes all enhance correctional program effectiveness, but recent studies also demonstrate that even evidence-based programs can increase recidivism if not competently delivered.[6]

RESULTS FROM OHIO

In order to illustrate the effect of these principles in actual correctional programs, the results from two recently conducted large-scale studies will be reviewed. These two studies, when taken together, involved over 26,000 offenders and over 100 correctional programs, including both residential and non-residential programs.

Recently, we completed two large-scale studies in Ohio that examined the effectiveness of community correctional programs. The first was a study of halfway houses (HWH) and Community Based Correctional Facilities (CBCFs), and was completed in 2002.[7] All of the programs included in this study were residential. The halfway houses ranged from full-service programs offering a wide range of programming, to more supportive facilities with minimal programs, such as limited counseling and job assistance. Offenders lived in these facilities, but generally worked in the community. The CBCFs are secure facilities that all provide a full range of programming: education, vocational, substance abuse, employment, structured groups, and so forth. Offenders remain in these facilities between four and six months and remain under local jurisdiction. The second was a study of Community Correctional Act programs, completed in 2005.[8] These were primarily probation and jail diversion programs, and included day reporting centers, electronic monitoring, work release, and intensive supervision programs.

Residential Study

The HWH/CBCFs study was the largest study of residential based correctional treatment programs ever done and included a total of 13,221 offenders. The experimental groups included 3,737 offenders released from

6. *See e.g. Outcome Evaluation of Washington State's Research-Based Programs for Juvenile Offenders*, Wash. St. Inst. for Pub. Policy, 3 (2006) (available at http://www.wsipp.wa.gov/rptfiles/04-01-1201.pdf).

7. Christopher T. Lowenkamp & Edward J. Latessa, *Evaluation of Ohio's Community-Based Correctional Facilities and Halfway House Programs: Final Report*, http://www.drc.state.oh.us/web/Reports/UCReportFinal.pdf (Sept. 1, 2002) [hereinafter Lowenkamp, *Evaluation*].

8. Christopher T. Lowenkamp & Edward J. Latessa, *Evaluation of Ohio's CCA Funded Programs: Final Report*, http://www.uc.edu/criminaljustice/ProjectReports/Final_CCA_Report.pdf (Apr. 28, 2005) [hereinafter Lowenkamp, *CCA Funded Programs*].

prison in Fiscal Year (FY) 1999 and placed in one of thirty-seven halfway houses in Ohio, and 3,629 offenders directly sentenced to one of fifteen CBCFs. The control group included 5,855 offenders released from prison into parole supervision during the same time period. Offenders from the experimental and control groups were matched based on offense level and county of sentencing; in addition, each offender was given a risk score based on fourteen factors that predicted outcome.[9] This allowed us to assign each offender a risk score corresponding to their probability of recidivating. In turn, this enabled us to compare low-risk offenders who were placed in a residential program to low-risk offenders who were not, and high-risk to high-risk in a similar fashion. A two-year follow up was conducted for all offenders, with incidents of recidivism including incarceration in a state prison.[10] The study also examined the relationship between program characteristics, such as treatment model, staff attributes, assessment practices, and program effectiveness in reducing recidivism.[11]

Who to Target

As mentioned previously, offenders in this study were all given a risk score based on selected factors. Four risk groups were created: low, low moderate, moderate, and high. The failure rates (i.e., amounts of recidivism) ranged from nearly 18% for the low-risk group to nearly 60% for the high-risk group. For brevity, only the low- and high-risk groups are included in this article; they are presented in Figure 1 and Figure 2.

Figure 1 shows the treatment effects for low-risk offenders. As represented in the graph, most programs had higher recidivism rates for low-risk offenders when compared to the control group. For example, low-risk offenders placed in Program B had a 36% higher recidivism rate than low-risk offenders in the comparison group (who were in a supervision-only program). Overall, the total sample of low-risk offenders placed in a residential facility had a 4% higher recidivism rate than their low-risk counterparts in the comparison group.

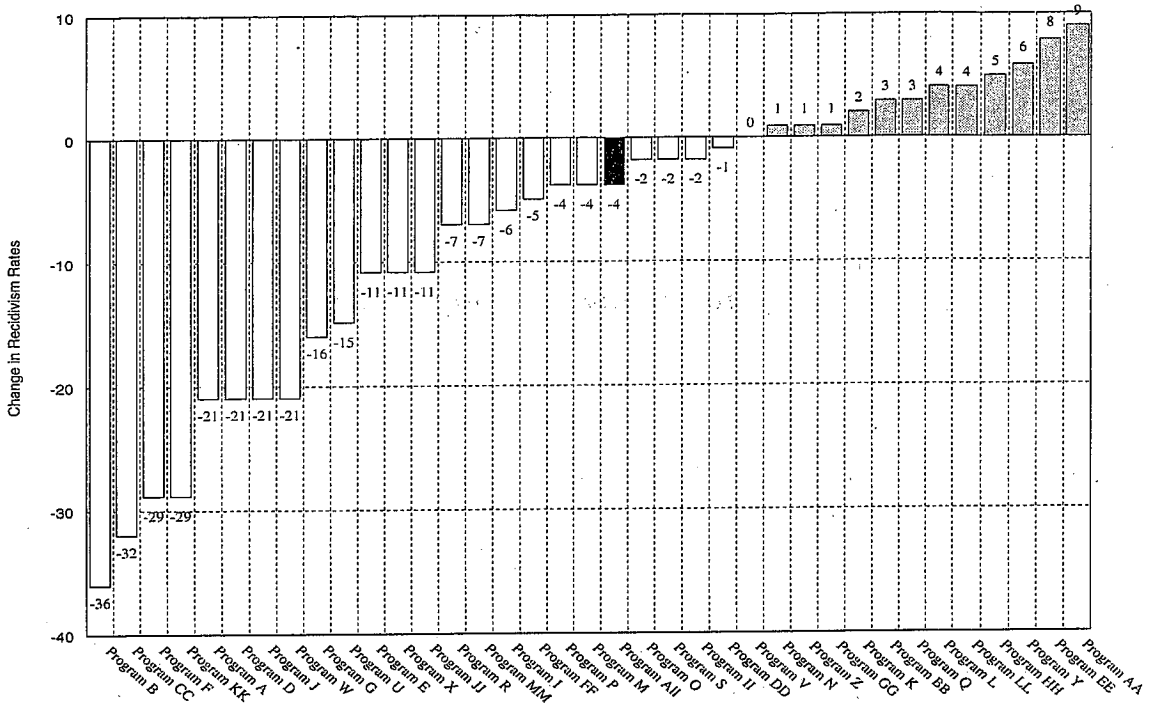
Conversely, Figure 2 shows the results for high-risk offenders. Here we see that most of the same programs showed significant positive treatment effects for high-risk offenders. For the overall totals, high-risk offenders placed in a residential facility reported an 8% lower recidivism rate than the high-risk offenders in the comparison group. More importantly, ten of

9. The risk factors included: age, education, marital status, psychological problems, alcohol abuse, drug abuse, whether employed at time of arrest, number of prior arrests, number of prior incarcerations, number of prior community control violations, prior sex offense, prior violent offense, current offense type, and current offense degree.

10. New arrests were also examined but are not reported in this article.

11. For a complete description of the methodology, *see* Lowenkamp, *Evaluation*, *supra* n. 7, at 3–11; Lowenkamp, *Increasing the Effectiveness*, *supra* n. 2, at 267–272.

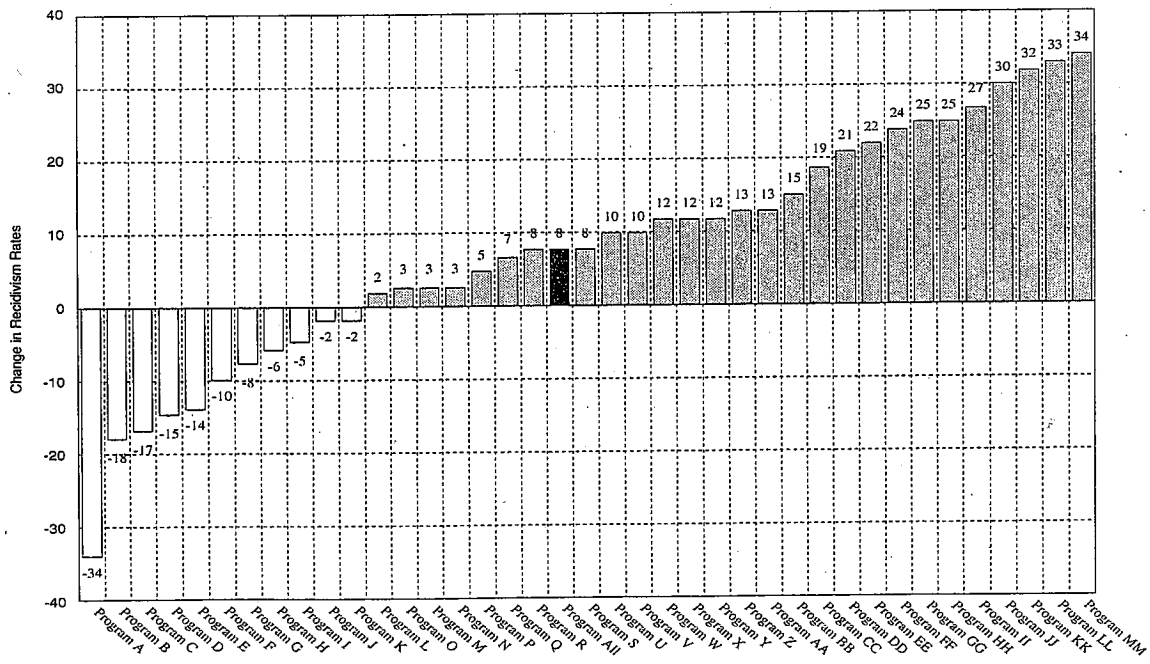
FIGURE 1. TREATMENT EFFECTS FOR LOW RISK OFFENDERS



the programs showed a greater than 20% reduction in recidivism and four had a 30% or higher reduction in recidivism.

Perhaps the risk principle can best be illustrated by examining Program KK. For high-risk offenders Program KK reduced recidivism by 32%,

FIGURE 2. TREATMENT EFFECTS FOR HIGH RISK OFFENDERS

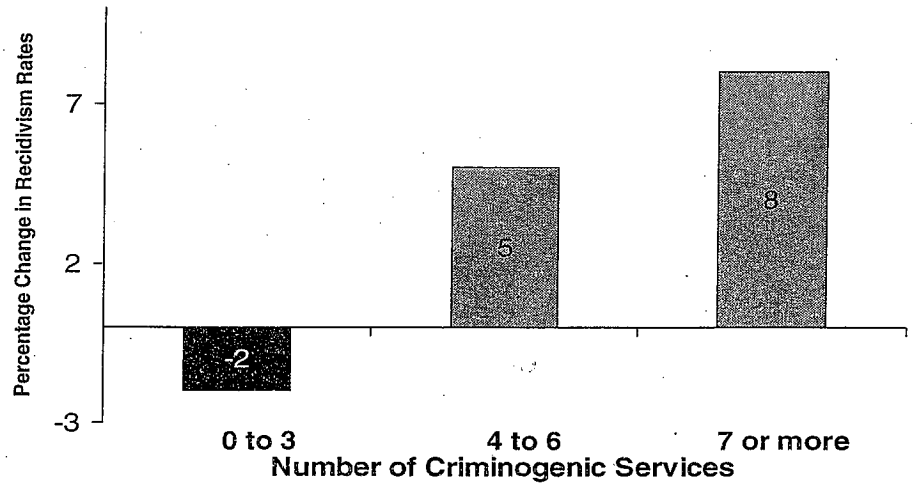


while for low-risk offenders it increased recidivism by 29%. Clearly, placing low-risk offenders into these intensive correctional programs produced higher recidivism rates than had we provided only supervision. Conversely, we see substantial treatment effects when looking at the high-risk offenders. That is, positive treatment effects indicating a reduction in recidivism were noted for high-risk offenders while either negative treatment effects or increases in recidivism were noted for the low-risk offenders.

What to Target

Next we examine the need principle by looking at the number of criminogenic needs targeted by the programs. Figure 3 clearly shows that the more criminogenic needs targeted by a program, the greater the reduction in recidivism rates. Targeting a higher number of crime-producing needs increased the effects of the programs on recidivism rates. Conversely, programs that targeted an insufficient number of criminogenic needs—three or less—showed a slight increase in failure rates. Unfortunately, the data were not available to distinguish which criminogenic factors were targeted, or how much time was spent on each area. Future research should focus on addressing these important questions.

FIGURE 3. NUMBER OF CRIMINOGENIC AREAS TARGETED & TREATMENT EFFECTS FOR RESIDENTIAL PROGRAMS



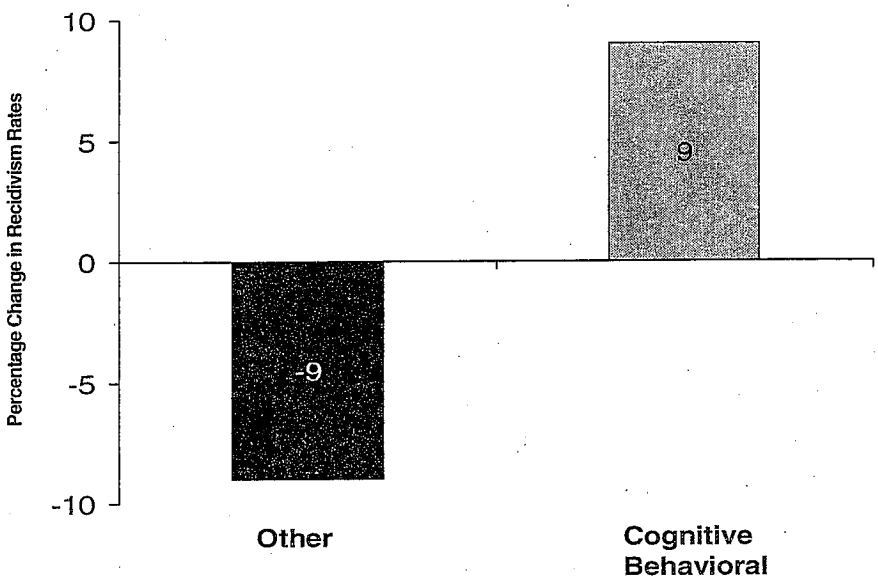
Negative numbers indicate increases in recidivism. Overall correlations between the number of programs offered and treatment effect is 0.13, while the correlation between the number of criminogenic services offered and treatment effect is 0.23.

How to Target

To study the treatment principle we examined several factors, including the treatment model used by the program and the use of behavioral strategies such as role-play and the practice of new skills. As Figure 4 illustrates, if the program used a cognitive behavioral model the result was a

reduction in recidivism. All other models (eclectic, 12-Step, talk therapy, etc.) produced a negative effect. The use of behavioral strategies, such as role-playing and practicing new behaviors, was also related to reductions in recidivism; programs that used these techniques produced stronger results in almost every group than those that only used them occasionally or not at all. These findings are presented in Figure 5. It is also important to note that these results include all offenders in the study (low as well as high), and the findings might even be stronger if the programming was restricted to high-risk offenders.

FIGURE 4. RELATIONSHIP BETWEEN TREATMENT MODEL & TREATMENT EFFECT FOR RESIDENTIAL PROGRAMS

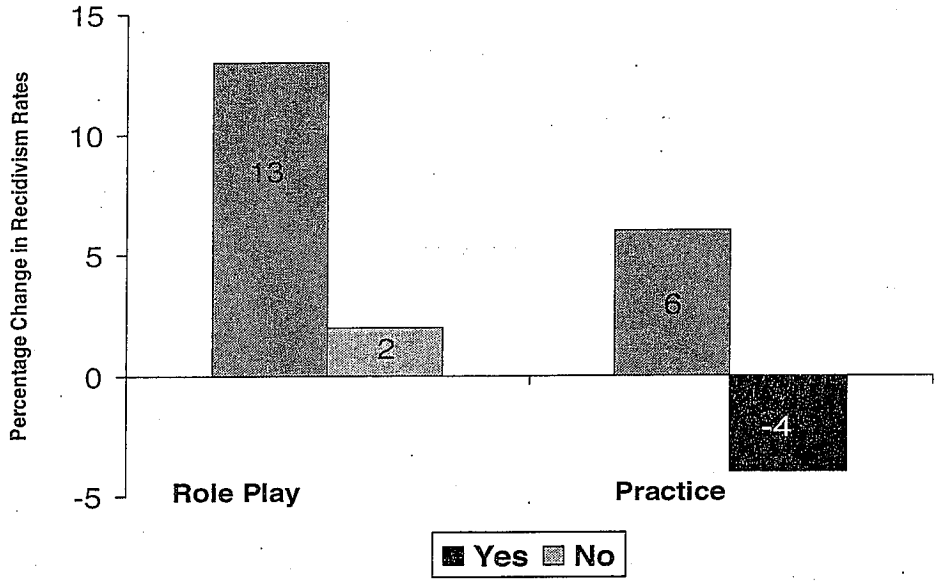


Program Integrity

Finally, to examine the relationship between program fidelity and outcome, each program was given a score on "program integrity" that included program elements found to be important in effective programs.[12] Higher "program integrity" scores were associated with greater effectiveness. For example, programs that were low on this measure demonstrated a nineteen percent increase in recidivism, while those that scored at the highest level reduced recidivism by 22%. These results are presented in Figure 6 and clearly demonstrate that program integrity is an important aspect of effective correctional programs.

12. All the areas matter, but assessment, treatment, and implementation were particularly important. *See* Christopher T. Lowenkamp, *Correctional Program Integrity and Treatment Effectiveness: A Multi-Site, Program-Level Analysis*, 140 (unpublished Ph.D. dissertation, U. Cincinnati 2004) (copy on file with the *University of St. Thomas Law Journal*).

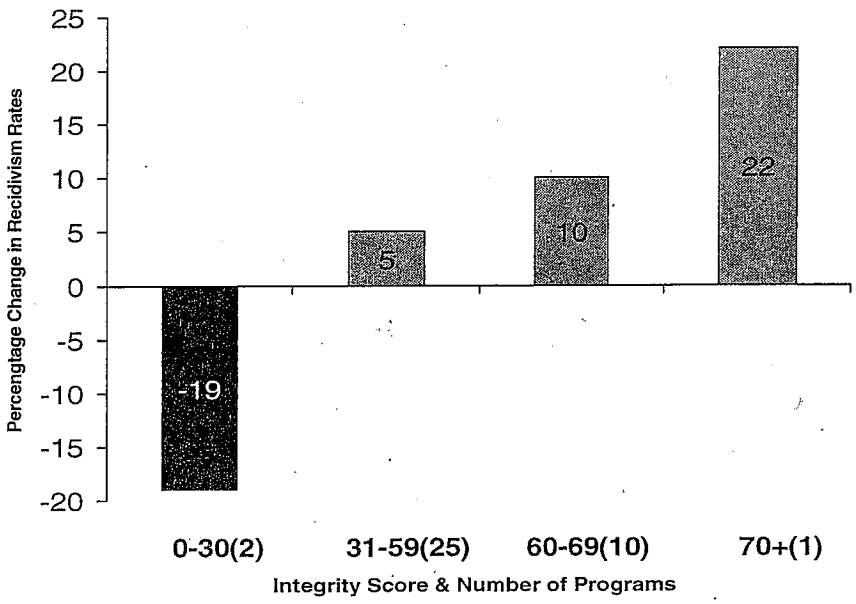
FIGURE 5. RELATIONSHIP BETWEEN TREATMENT ACTIVITIES & TREATMENT EFFECT FOR RESIDENTIAL PROGRAMS



NON-RESIDENTIAL STUDY

The second study involved non-residential programs for offenders. The primary purpose of this study was to examine the Community Correction

FIGURE 6. RELATIONSHIP BETWEEN PROGRAM INTEGRITY SCORE & TREATMENT EFFECT FOR RESIDENTIAL PROGRAMS



Act (CCA) programs in Ohio to determine if they were effective in reducing recidivism. The vast majority of the programs offered under this Act were intensive supervision, day reporting, and electronic monitoring pro-

grams. Most prior research on intensive supervision programs (ISPs) has shown, at best, little if any effect on recidivism and, at worst, that such programs can lead to slight *increases* in recidivism rates.[13] It should, however, be noted that recent research has indicated the philosophy of the ISP to be a determining factor in effectiveness.[14] For example, those ISPs that attempt to achieve a more equal balance between surveillance activities and service provision have been found to be more effective than those that simply increase surveillance and drug testing.[15]

There were two basic types of CCA programs in this study: 1) prison diversion programs that targeted felons who were given some form of community supervision beyond regular probation; and 2) jail diversion programs that targeted misdemeanants who were given some form of community supervision beyond regular probation. Over 13,000 offenders who were supervised in the community were included in this study, and a quasi-experimental design was used that matched comparison cases. For the prison diversion group, two comparison groups were used: parolees and offenders who received regular probation. For the jail diversion group, comparisons were made between those who went to jail and regular probationers. The recidivism measure for the prison diversion group was incarceration in a state penal institution, and for the jail diversion group it was any new arrest.[16]

Recidivism Results

The first question addressed the effectiveness of the CCA programs in reducing recidivism. The results for the prison diversion group are presented in Figure 7. The findings show that the prison diversion group was 2% less likely to recidivate than parolees, but was 14% more likely than regular probationers. Similar results were found in the jail diversion group: a 6% lower recidivism rate than the jail group, and a 6% increase in recidivism when compared to the probation sample. These results are represented in Figure 8. While there was no significant difference between types of programs (ISP, day reporting, electronic monitoring, etc.), there were some programs across counties that were more effective than others.

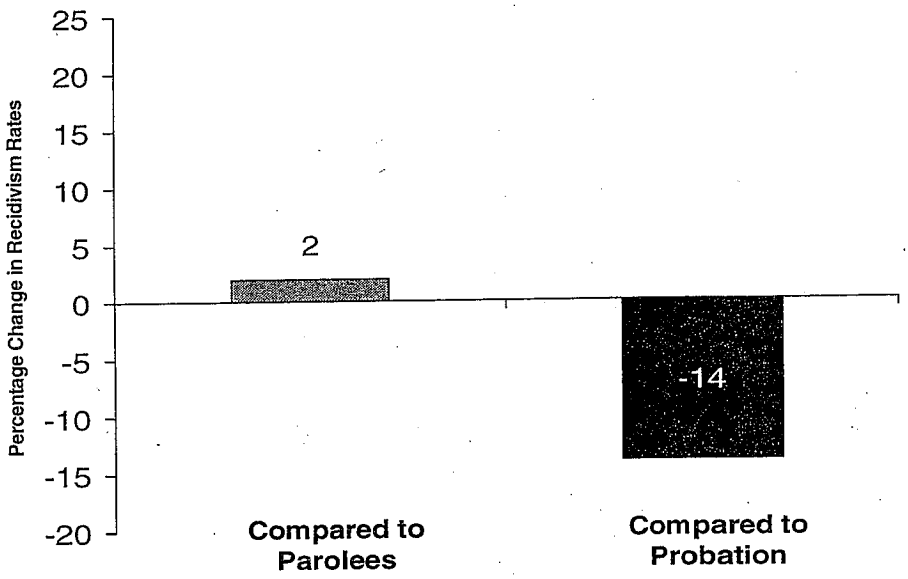
13. *See* Joan Petersilia & Susan Turner, *Intensive Probation and Parole*, in *Crime and Justice: A Review of Research* vol. 17, 281, 310–311 (Michael Tonry ed., U. Chi. Press 1993); Betsy Fulton, Edward J. Latessa, Amy Stichman & Lawrence F. Travis, *The State of ISP: Research and Policy Implications*, 61 Fed. Probation 65, 72 (1997); Paul Gendreau, Claire Goggin, Francis T. Cullen & Donald A. Andrews, *The Effects of Community Sanctions and Incarceration on Recidivism*, Correctional Serv. Canada Forum, ¶ 9 (2000) (available at http://www.csc-scc.gc.ca/text/pblct/forum/e122/e122c_e.shtml).

14. Steve Aos, Marna Miller & Elizabeth Drake, *Evidence-Based Adult Corrections Programs: What Works and What Does Not*, 3–7, Wash. St. Inst. for Pub. Policy (2006) (available at http://www.wsipp.wa.gov/rptfiles/06-01-1201.pdf).

15. Also referred to as "see 'em and pee 'em" programs.

16. The latter excluded minor traffic offenses. For a detailed description of the methodology, *see* Lowenkamp, *CCA Funded Programs*, *supra* n. 8, at 3–12.

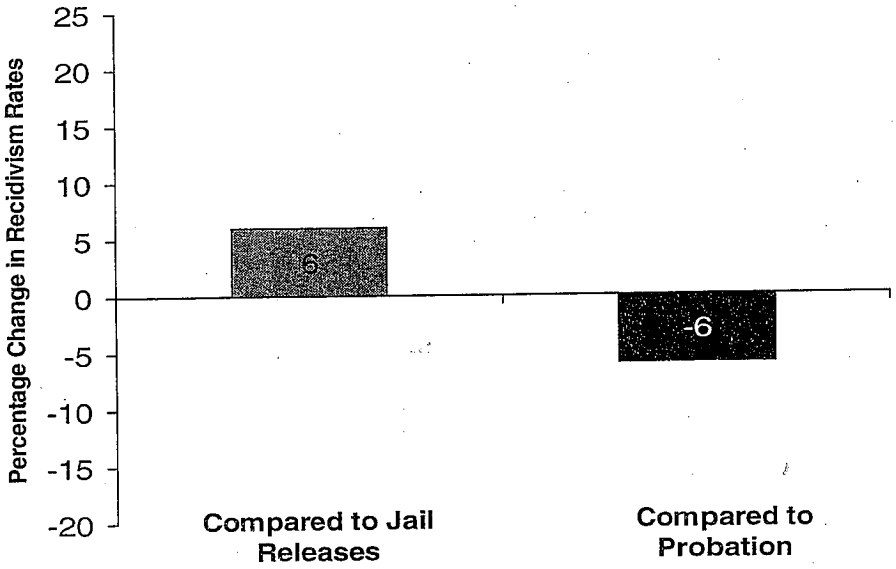
FIGURE 7. CHANGES IN RECIDIVISM FOR CCA PRISON DIVERSION GROUP & COMPARISON GROUPS



Program Attributes and Outcome

Similar to the residential study, the data were analyzed around the principles of risk, need, treatment, and program fidelity to identify program

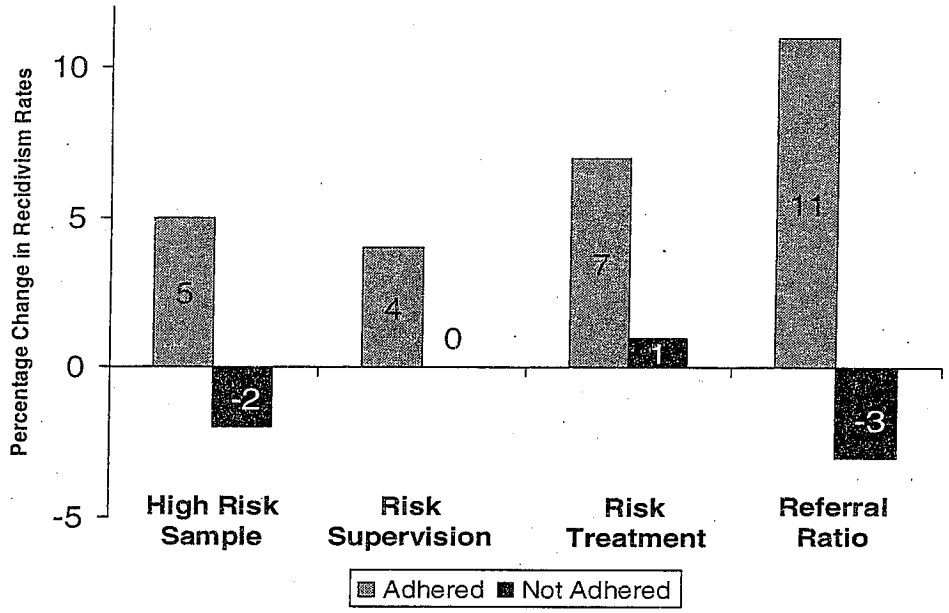
FIGURE 8. CHANGES IN RECIDIVISM FOR CCA JAIL DIVERSION GROUP & COMPARISON GROUPS



attributes that were associated with successful programs. Four major factors were observed to be significantly related to recidivism among all the programs: 1) the proportion of high-risk offenders in the program; 2) the level of supervision for high-risk offenders; 3) the provision of more treatment

for high-risk offenders; and 4) the number of referrals to outside agencies for services for high-risk offenders. Figure 9 shows the effects of these four factors on recidivism rates.

FIGURE 9. CHANGES IN RECIDIVISM RATES BY FOUR PROGRAM FACTORS FOR NON-RESIDENTIAL PROGRAMS



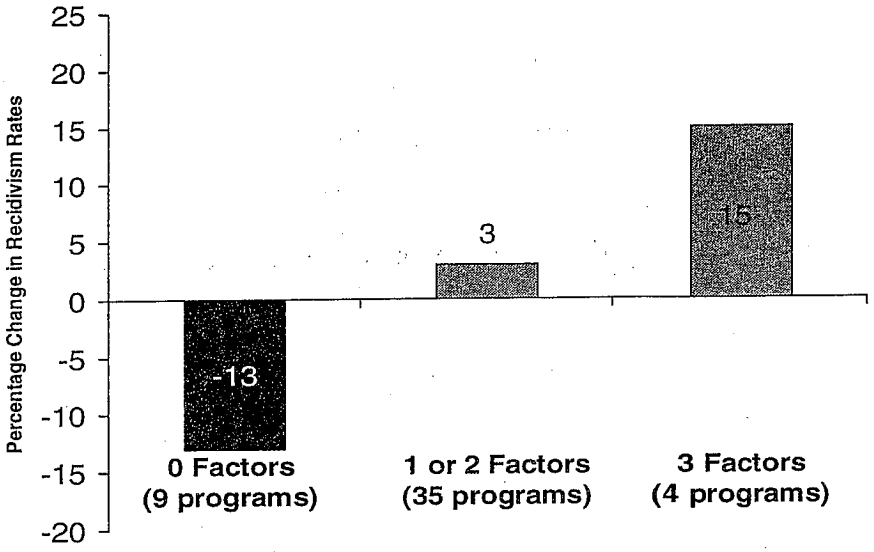
The additive effects of these factors were in turn applied to each of the programs in the study. Nine of the programs in the study did not produce indicators of any of these four factors, and the result of the average change in recidivism rates for these nine programs was a 13% increase in recidivism. Thirty-five programs met one or two of the factors and produced a 3% reduction in recidivism. Four programs met three of the factors and showed a 15% reduction in recidivism. None of the programs met all four. These results are presented in Figure 10.

As with the HWH/CBCFs study, each program was given a program integrity score. As represented in Figure 11, the higher the program integrity score the higher the treatment effect, with low-scoring programs increasing recidivism by 15% compared to the highest-scoring programs, which showed reductions in recidivism of 16%. Clearly, programs with low integrity scores do more harm than good because they are shown to increase the rate of recidivism.

SUMMARY

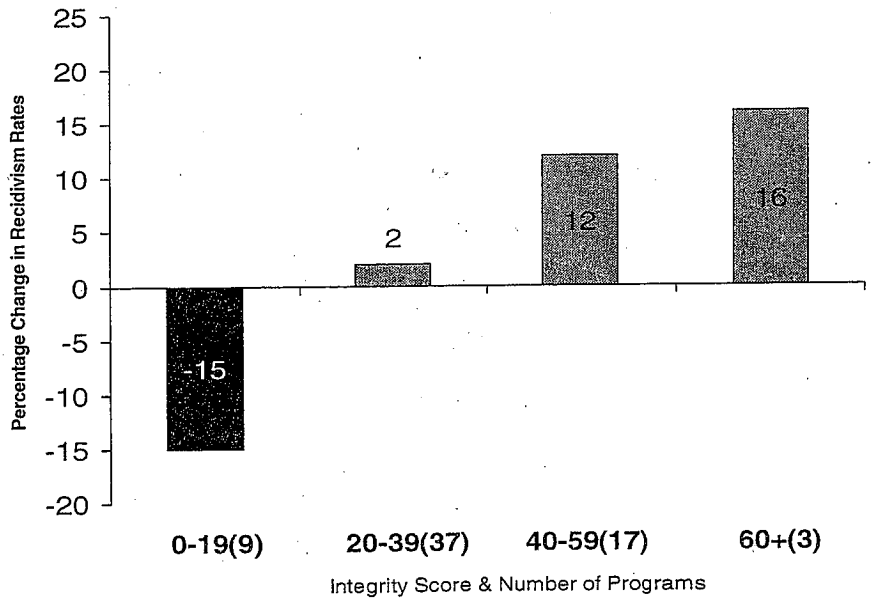
In both studies, the risk principle was evident and manifested in several ways. Focusing on high-risk offenders was an important factor and led to greater program effectiveness. There was also a cost for failing to adhere to the risk principle. In the best scenario, including low-risk offenders in

FIGURE 10. AVERAGE CHANGE IN RECIDIVISM BY 4 POINT FACTOR SCORE FOR NON-RESIDENTIAL PROGRAMS



intensive interventions results in a waste of resources and no change in the low-risk offenders' behavior. In the worst scenario—and fairly common in the HWH/CBCFs study—including low-risk offenders in residential pro-

FIGURE 11. RELATIONSHIP BETWEEN PROGRAM INTEGRITY SCORE & TREATMENT EFFECT FOR NON-RESIDENTIAL PROGRAMS



grams has a detrimental effect on the offender. Clearly, low-risk offenders should not be placed with high-risk offenders, since the effects are often counterproductive. Findings also support increasing the level of supervision in accordance with risk level and varying the number of services or referrals

by risk level. In other words, high-risk offenders appear to benefit from a longer and more intense dose of supervision and treatment.

In both studies, the need principle mattered. The more services or referrals targeting criminogenic needs, the stronger the effects. It also became clear, consistent with prior research, that the majority of services should favor targeting criminogenic needs. Treatment and program integrity were also important in both studies. Well-designed, well-implemented programs (based on sound theory) were found to substantially reduce recidivism; however, the same types of programs, when poorly implemented, actually resulted in an increase in recidivism rates.

Criminal behavior is something that affects all of us in some way. Crime helps determine where we live, where we send our children to school, when and where we go out, how much we pay for auto insurance, and whether our tax dollars are used to build new roads or new prisons. For these and other reasons it is important that we continue to develop correctional programs that increase public safety through the effective rehabilitation of offenders. When taken together, these two studies provide strong support that correctional programs can have a substantial effect on recidivism, provided they follow some empirically derived principles.