

Reducing the Harm: Identifying Appropriate Programming for Low-Risk Offenders

By Christopher T. Lowenkamp, Paula Smith and Kristin Bechtel



Much of the focus of programming evaluation research has been on the impact of recidivism rates for the high-risk offender. With limited funding and resources, it is necessary to direct services to the group that can potentially demonstrate the largest percentage decline in recidivism. Although this is certainly appropriate, there is a need to identify the types and amounts of treatment and programming, if any, that may benefit the lower-risk offender. Specifically, the basis for this decision-making follows the risk principle.

More than 15 years ago, Andrews, Bonta and Hoge presented the concept of the risk principle.¹ Since then, there have been multiple studies and meta-analyses that have demonstrated support for the risk principle. Simply put, this principle suggests that an offender's risk level should dictate the types of services he or she receives, the dosage needed, and the amount of supervision required to reduce the likelihood or risk of recidivism.² Ideally, an offender's risk level should be determined by an actuarial risk and needs assessment that has been validated and normed on the targeted population. In addition, treatment target areas should be identified based on the criminogenic needs that are indicated through an actuarial risk assessment.

Programs that implement such practices have begun to recognize that lower-risk offenders have either been referred to or court-ordered to correctional treatment programming for services that may be more appropriately developed for a higher-risk individual. Subsequently, research has indicated that intensive treatment and supervision for low-risk offenders has increased this population's recidivism rates.³ Given this negative implication, the following study offers some preliminary findings based on a meta-analysis of the existing research that has examined how programming has impacted the lower-risk offending population, and it identifies which services, if any, would minimize the harm.

Why Use the Risk Principle?

As previously stated, there is empirical evidence to support the risk principle. In particular, the overall finding of a meta-analysis conducted by Andrews and Dowden demonstrated a 19 percent decrease in recidivism when programs adhered to the risk principle; yet, when programs deviated from the risk principle, the recidivism rate increased 4 percent.⁴ When examining the intensity of services, one study's findings showed that intensive rehabilitation supervision resulted in a 17 percent increase in the recidivism rates of the lower-risk offenders. However, the higher-risk offenders in this same program experienced a 20 percent reduction in recidivism.⁵ Findings from a large halfway house study suggested that intensive programming for higher-risk offenders decreased recidivism by 10 percent to 30 percent. Yet, these same programs consistently increased recidivism for the lower-risk offenders.⁶ To summarize, these findings suggest that intensive programming and supervision may be appropriate for a high-risk offender but not a low-risk offender. Further, these results may indicate that combining the different risk levels in programming could potentially increase the recidivism rates for the lower-risk group.

Evaluating Research With Meta-analysis

There are several benefits of choosing to conduct a meta-analysis to address this topic and to synthesize the existing research. First, this technique standardizes the review process through the use of a coding guide that is completed for each eligible study. Each item on the coding guide is intended to capture a study's important features that potentially could impact the overall effect size. For example, in the current study, three important features, or variables, were coded — the risk level of the group being examined, the types of services being evaluated, and the dosage of treatment and programming. Second, the final result of the meta-analysis is calculated into one number, called the effect size. For this meta-analysis, the effect size can be interpreted as an increase or a decrease in recidivism based on the risk level of the group. Finally, a meta-analysis can reveal gaps in the literature that would necessitate future research prior to any policy recommendations being offered. Given these attributes, this meta-analysis intended to assess whether there is sufficient evidence to identify types of programming and services that are beneficial, rather than harmful, to the lower-risk offender.

Conceptual Framework

An extensive literature search identified all possible research focusing on program evaluation and risk. The chosen studies were then narrowed based on their inclusion of specific criteria. These criteria required that only quasi-experimental studies with clearly defined treatment and comparison groups from an offending population were eligible. In addition, the research had to include at least one post-release outcome measure of recidivism and either specify the sample's risk level or provide the descriptive statistics necessary to allow for classification of a modified risk level.

Once all eligible studies were coded and the individual effect sizes were calculated for each study, data from the coding guides were entered into a database and the overall effect size was calculated. An effect size of 0.20, for example, would indicate that the treatment decreased recidivism by 20 percent. Similarly, an effect size of -0.20 would indicate that the treatment increased recidivism by 20 percent.

Finally, confidence intervals were examined to determine the impact of programming on all samples based on risk level: The smaller the range (<0.10) between the upper and lower limits of the confidence interval suggests that there should be more confidence in the effect size value. Conversely, the larger the range (>0.10) between the upper and lower limits suggests that the effect size value should be interpreted cautiously. Similar to significance testing, the confidence interval can also suggest that the effect size is significantly correlated. Confidence intervals that include zero in the range indicate that the effect size is not significant (e.g., a confidence interval of -0.05 to 0.05 is not significant).

Table 1. Treatment Descriptions

Types of Treatment	Percentage of Studies*
Substance abuse	24.3
Anti-social cognitions/attitudes	21.6
Treatment Modality	
Group milieu	15.3
Cognitive behavioral	15.3
Family	15.3
Therapeutic community	9.4
Treatment Location	
Institution	23.8
Community	76.2
Treatment Format	
Group sessions	60.0
Individual sessions	26.7

* Percentages for each category may not add up to 100 percent due to missing data.

Findings

There were 957 studies identified during the literature retrieval process. At the time this article was written, approximately 170 studies had been coded and 42 fulfilled the criteria for inclusion. As such, the sample size is 42 or $k = 42$. Methodological flaws noted in the rejected studies included lack of appropriate comparison groups, variability in the outcomes used, inadequate follow-up period to measure recidivism (often too short), and/or no reported statistic that could be calculated into a study effect size, including proportions of failures and successes for both the treatment and comparison groups. Almost 93 percent of the studies identified were from published sources. In addition, slightly more than 84 percent of the entire sample comprised males with a mean age of 23 years.

Thirteen studies comprised low-risk offenders, while 14 studies included offenders that would be classified as moderate risk. There were 12 high-risk samples and three studies that were identified as providing treatment for mixed-risk groups.

Table 1 describes the types and modalities of treatment as well as the location and format of treatment found in the included studies. Although missing data was problematic in many of the studies, the types of treatment evaluated in the literature often focused on substance abuse (24.3 percent) or anti-social cognitions (21.6 percent). Group milieu, cognitive-behavioral therapy and family treatment were noted in 15.3 percent of the studies, and therapeutic communities were reported in 9.4 percent of the included research. About 76 percent of the studies evaluated community-based treatment programs, and the remaining 23.8 percent were located in institutions. Exactly 60 percent of the studies evaluated group treatment sessions, and 26.7 percent examined the effectiveness of individual programming.

Effect Sizes

Table 2 presents the findings for the effect sizes based on the risk level of the sampled studies and the overall

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effect size for the 42 studies, as well as the total sample size by risk level. Confidence intervals are also provided. The effect size for the low-risk group indicated a slight decrease in recidivism for that group. However, when examining the confidence interval, there is a wide range between the upper and lower levels, and a zero is included in that range. As such, the effect size calculated for the low-risk group should be interpreted cautiously. Regarding the effect size for the moderate-risk group, an increase in recidivism was noted and the confidence interval suggests that this effect size can be interpreted with some confidence. For the high-risk studies, the effect size suggests a decrease in recidivism and the confidence interval suggests again that the effect size can be interpreted with some confidence. When examining the mixed-risk group, it should be noted that the study sample size is three. Given this small sample size, these findings should typically be interpreted with caution. As Table 2 demonstrates, the mixed-risk group experienced an 18 percent increase in recidivism and the relatively short width of the confidence interval suggests that there should be confidence in interpreting this effect size. Finally, the overall effect size indicated a 2.6 percent increase in recidivism with all included studies, and the range for the confidence interval is rather small, which suggests confidence in the interpretation of the effect size value.

Table 2. Effect Sizes by Risk Level

Study Risk Level	<i>k</i>	N	Effect Size	Confidence Interval
Low risk	13	3,482	0.014	-0.02 to 0.05
Moderate risk	14	4,316	-0.042	-0.08 to -0.01
High risk	12	2,758	0.05	0.02 to 0.08
Mixed risk	3	4,124	-0.18	-0.22 to -0.15
Overall effect size	42	14,680	-0.026	-0.04 to -0.01

Discussion

Although these findings are certainly preliminary and the small sample sizes should encourage a cautious interpretation of the results, a couple points can be made regarding this initial analysis. First, the effect size for the low-risk group may not be reliable at this time given the range of the confidence interval; therefore, any conclusions offered regarding the low-risk group would be inappropriate. Second, the effect size for the mixed-risk group provided an interesting finding — programs that mix risk levels have increased offender recidivism.

Given that this meta-analysis is ongoing, the process of coding eligible studies will continue until recommendations that identify the types and dosages of treatment that minimize harm for the lower-risk offender are formulated. Until those findings can be reported, these initial results provide some evidence that programs should continue to identify the risk levels of their target populations and minimize the mixing of these risk levels.

¹ Andrews, D.A., J. Bonta and R.D. Hoge. 1990. Classification for effective rehabilitation: Rediscovering psychology. *Criminal Justice and Behavior*, 17(1):19-52.

² Andrews, D.A. et al. 1990.

Andrews, D.A. and C. Dowden. 1999. A meta-analytic investigation into effective correctional intervention for female offenders. *Forum on Corrections Research*, 11(3):18-21.

Andrews, D.A. and C. Dowden. 2006. Risk principle of case classification in correctional treatment. *International Journal of Offender Therapy and Comparative Criminology*, 50(1):88-100.

Dowden, C. and D.A. Andrews. 1999a. What works for female offenders: A meta-analytic review. *Crime and Delinquency*, 45(4):438-452.

Dowden, C. and D.A. Andrews. 1999b. What works in young offender treatment: A meta-analysis. *Forum on Corrections Research*, 11(2):21-24.

Lipsey, M.W. and D.B. Wilson. 1998. Effective intervention for serious juvenile offenders: A synthesis of research. In *Serious and violent juvenile offenders: Risk factors and successful interventions*, eds. R. Loeber and D. Farrington, 313-345. Thousand Oaks, Calif.: SAGE Publications.

Lowenkamp, C.T., E.J. Latessa and A. Holsinger. 2006. The risk principle in action: What have we learned from 13,676 offenders and 97 correctional programs? *Crime and Delinquency*, 52(1):77-93.

³ Andrews, D.A, I. Zinger, R.D. Hoge, J. Bonta, P. Gendreau and F.T. Cullen. 1990. Does correctional treatment work? A clinically relevant and psychologically informed meta-analysis. *Criminology*, 28(3):369-404.

Andrews, D.A. and C. Dowden. 1999.

Dowden, C. and D.A. Andrews. 1999a.

Dowden, C. and D.A. Andrews. 1999b.

Lipsey, M.W. and D.B. Wilson. 1998.

Lowenkamp, C.T. and E.J. Latessa. 2005. Increasing the effectiveness of correctional programming through the risk principle: Identifying offenders for residential placement. *Criminology & Public Policy*, 4(2):263-290.

⁴ Andrews, D.A. and C. Dowden. 1999.

⁵ Bonta, J., S. Wallace-Capretta and J. Rooney. 2000. A quasi-experimental evaluation of an intensive rehabilitation supervision program. *Criminal Justice and Behavior*, 27(3):312-329.

⁶ Lowenkamp, C.T. and E.J. Latessa. 2005.

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