Residential Community Corrections and the Risk Principle: Lessons Learned in Ohio

Christopher T. Lowenkamp, Ph.D.
Assistant Director, University of Cincinnati Corrections Institute
Edward J. Latessa, Ph.D.
Professor & Head, Division of Criminal Justice
University of Cincinnati

A large-scale research project (fifty-three community-based residential correctional programs and more than 13,000 cases) provided data for determining the degree to which the risk principle impacts program effectiveness. The programs generally increased the recidivism rates of low and low/moderate risk offenders relative to the recidivism rates of the comparison group. However, for moderate to high risk offenders, the programs clearly demonstrated their effectiveness.

INTRODUCTION

The importance of risk assessment to effective correctional programming is now well established (Andrews and Bonta 1998). It has, however, become increasingly clear that the mere process of assessing offenders will not increase effectiveness. The assessment process does yield important information that, if used to guide decisions regarding supervision and placement, can increase the effectiveness of a correctional program (Gendreau, French, and Taylor 2002). More specifically, agencies that adhere to the risk principle have an increased ability to reduce recidivism when compared to programs that do not (Dowden and Andrews, 1999a).

The risk principle was discussed by Andrews, Bonta, and Hoge (1990) along with other principles of effective classification. While all of the principles discussed by Andrews, Bonta, and Hoge (1990) are important and impact the effectiveness of a correctional agency, the risk principle is particularly germane to the discourse contained in this paper. Simply put, the risk principle states that the intensity of the programming and supervision should be matched to the risk[1] level of the offender. Therefore, intense correctional interventions should be reserved for the higher risk offenders. To fail to do so leads to missed opportunities at improving public safety, a waste of correctional resources, and increasing the probability of offending behavior by low risk offenders.

Considerable research testing the importance of the risk principle has been conducted through the process of meta-analyses. For example, studies by Andrews, Zinger, Hoge, Bonta, Gendreau, and Cullen (1990), Lipsey and Wilson (1998), Dowden and Andrews (1999a, 1999b, and 2000), Wilson, Gottfredson, and Najaka (2001), Wilson, Lipsey, and Derzon (2003), and Lowenkamp, Holsinger, and Latessa (2003) all indicate that interventions are most effective when delivered to samples with higher-risk levels. Generally, this research supports the conclusion reached by Lipsey and Wilson (1998:338) that "... there must be potential for bad behavior before bad behavior can be inhibited."

The research contained in this paper uses data from 53 community based residential correctional programs in Ohio to determine the degree to which the risk principle impacts program effectiveness. The findings of this research are extremely important for correctional policy. If residential programming is found to be more effective with higher-risk offenders, program and referral policies and procedures should be developed that focus on targeting the higher-risk offenders for admission to these residential programs. In addition, if iatrogenic effects are noted for a particular category of risk, policies should be developed that exclude them from participation in such programming.

METHODS

To calculate the effectiveness of the residential programs across the various levels of risk, information on a treatment group (offenders that entered and successfully completed one of the residential programs) and a comparison group (offenders that were not placed in one of the residential programs) was collected. This information was used to estimate logistic regression models for each of the programs where an ample number of cases existed to support the estimation of a multivariate logistic regression model. The following paragraphs provide additional information on the

participants, measures, and analyses contained in this study.

Participants

The experimental group used to calculate the differences in recidivism rates contained offenders released from a state institution, that were placed on parole, post release control (PRC), or transitional control[2] and placed in a halfway house (HWH), or offenders sentenced to community based correctional facilities (CBCF)[3] in Ohio during fiscal year 1999. The total number of CBCF offenders in the experimental group is 3,629 while the total number of HWH offender in the experimental group is 3,737 for a total of 7,366.[4] These offenders were compared to a group of parolees/PRC offenders released from one of Ohio's correctional institutions during the same fiscal year without placement into a halfway house. The comparison cases (5,855) were drawn from a larger sampling frame (N=6,781) and were matched with the experimental cases on county of supervision and sex. Cases were further matched by crime type if the experimental case was coded as a sex offender

MEASURES

Individual level predictors for both the comparison and experimental group include race, gender, age, marital status, employment status upon arrest, a history of alcohol use, a history of drug use, mental health problems, and prior criminal history. Measures of prior criminal history included prior number of arrests, prior number of incarcerations, and whether the offender had any prior community control violations.

A measure of risk was developed based on a review of important risk predictors and existing risk assessment instruments. To develop the risk scale, cross-tabulations between the risk factors and re-incarceration for any reason were analyzed. The difference in the percentage re-incarcerated served as the weight for each factor. These factors were then added together to create an overall risk score (see Table 1 for factors and weights). This risk score ranged in value from 5 to 115 with an average of 65 and a standard deviation of 17. The riskscore demonstrates good predictive validity with a correlation of .25 between the aggregate risk score and re-incarceration. This correlation is similar in value to that relationship associated with other risk prediction instruments (see Gendreau, Little, and Goggin, 1996).

Once the risk scale was calculated, a visual inspection between the risk score and re-incarceration status was conducted to develop appropriate cutoff scores for risk levels. This resulted in four groups: low, low/moderate, moderate, and high. The recidivism rates for these four groups are reported in Table 2.

Table 1. Risk Assessment Factors and Weights

Factor	Weight	Factor	Weight
Age		Prior Arrests	
17-22	16.9	2+	12.3
23-36	7.2	1	2.9
37+	0	0	0
Less than High School Graduate		Prior Incarcerations	
Yes	7.6	2+	22.8
No	0	1	6.6
		0	0
Marital Status			
Single	7.5	Prior Conviction for Violent Offense	
Married	0	Yes	3.5
		No	0
Psychological Problem Indicated		Prior Conviction for Sex Offense	
Yes	1.90	Yes	5.8
No	0	No	0
Alcohol Problem Ever		Previous Community Control Violation	
Yes	4.7	Yes	6.9
No	0	No	0
Drug Problem Ever		Current Felony Degree	
Yes	9.0	3rd, 4th, 5th	22.8
No	0	2nd	6.6
		1st	0
Unemployed At Arrest		Current Offense Type	
Yes	6.5	Drug, Property, Sex	5
No	0	Person or Other	0

The outcome measure used in these analyses is subsequent incarceration in a state correctional facility. The follow up period for all offenders was two years following program termination date or the two years following release from prison (comparison group). While this is a conservative measure of criminal behavior it is recognized as an acceptable measure of recidivism and the records of intake to prison are fairly complete and accurate when compared to alternate measures of recidivism available in Ohio.

Table 2. Cutoff Scores and Associated Recidivism Rates

Risk Category (Score)	Recidivism Rate
Low (0-37)	18%
Low/Moderate (38-54)	30%
Moderate (55-75)	43%
High (76-115)	58%

DESIGN AND ANALYSIS

Multivariate logistic regression models were calculated for the overall group and each CBCF and HWH program site where the number of terminations from the program during FY99 was greater than or equal to fifty cases.[5] The multivariate logistic regression models controlled for race, sex, group membership, risk level, and one interaction term between group membership and risk level. The results from the multivariate logistic regression models were used to calculate predicted probabilities of recidivism based on the data on the average or typical offender contained in the sample. These predicted probabilities were calculated for each program and by risk level for each program.

Table 3. Demographics, Criminal History, and Offense Characteristics

Measure	Experimental Group	Comparison Group
Average Age	32	35
Percent White	51%	46%
Percent Male	86%	92%
Percent with at least one prior arrest	90%	84%
Percent with at least one prior incarceration	33%	40%
Offense Level		
1st degree felony	7%	9%
2nd degree felony	15%	29%
3rd degree felony	18%	18%
4th degree felony	31%	23%
5th degree felony	28%	22%
Offense Type		
Person	19%	26%
Sex	2%	4%
Drug	33%	36%
Property	35%	29%
Other	11%	7%

All differences are significant at $p < .05$. Tests of significance were not conducted for the national samples; their display is for comparison purposes

RESULTS AND DISCUSSION

Table 3 reports the demographic characteristics, criminal history, and offense characteristics for the sample used in this study. While the differences noted between the treatment and comparison group are statistically significant at the $p < .01$ level, many are not substantively different. In addition, most of these of these factors (with the exception of race and sex) were controlled for by our measure of risk.

In our analyses, we estimated a logistic regression model for the entire sample and then by each of the 38 programs (see endnote 6). The results of these regression models are visually displayed in Figures 1 through 5.

Figure 1 displays the changes in the probability of reincarceration for the entire sample and for each program based on the logistic regression model. The negative numbers are associated with increases in recidivism for the experimental group. That is, the negative numbers are associated with instances were the comparison group that received no intervention did better than the experimental group that was placed in a residential facility. The positive numbers represent decreases in the probability of recidivism or instances where the experimental group is expected to recidivate at a lower rate than the comparison group. The black bar in each graph represents the expected reduction or increase in recidivism for the entire sample. Figure 1 indicates that a majority of the programs demonstrated an expected reduction in recidivism ranging from 2 to 25% with an overall reduction of 5%. Twelve programs (approximately one-third) increased the expected recidivism rate of the program participants relative to the comparison group with increases ranging from 1 to 29%. To determine if the risk principle applied to this group of offenders and programming we estimated a model that allowed us to determine if the programs effects varied across levels of risk.

The results of the analyses that estimated the effects of the residential programming across the varying levels of offender risk are displayed in Figures 2 through 5. Figure 2 displays the expected changes in the probability of recidivism for low risk offenders. Note that 24 of the 36 programs[6] had no effect or increased the probability of recidivism for low risk offenders. Only 12 programs were associated with reductions in the probability of recidivism for low risk offenders. The largest reduction was 9 percentage points. A 4 percentage point increase in the probability of recidivism was noted for the entire sample.

The changes in the expected probabilities for low/moderate risk offenders are shown in Figure 3. Overall, a 1 percentage point increase in the probability of recidivism is noted for the low/moderate risk offender. Nineteen of the 38 programs failed to have any effect on recidivism or increased recidivism for those offenders that were enrolled in the programs. Conversely, 19 programs demonstrated a reduction in the expected probabilities of recidivism. However, only 5 programs had expected reductions of over 10 percentage points.

Figure 1. Treatment Effects by Program

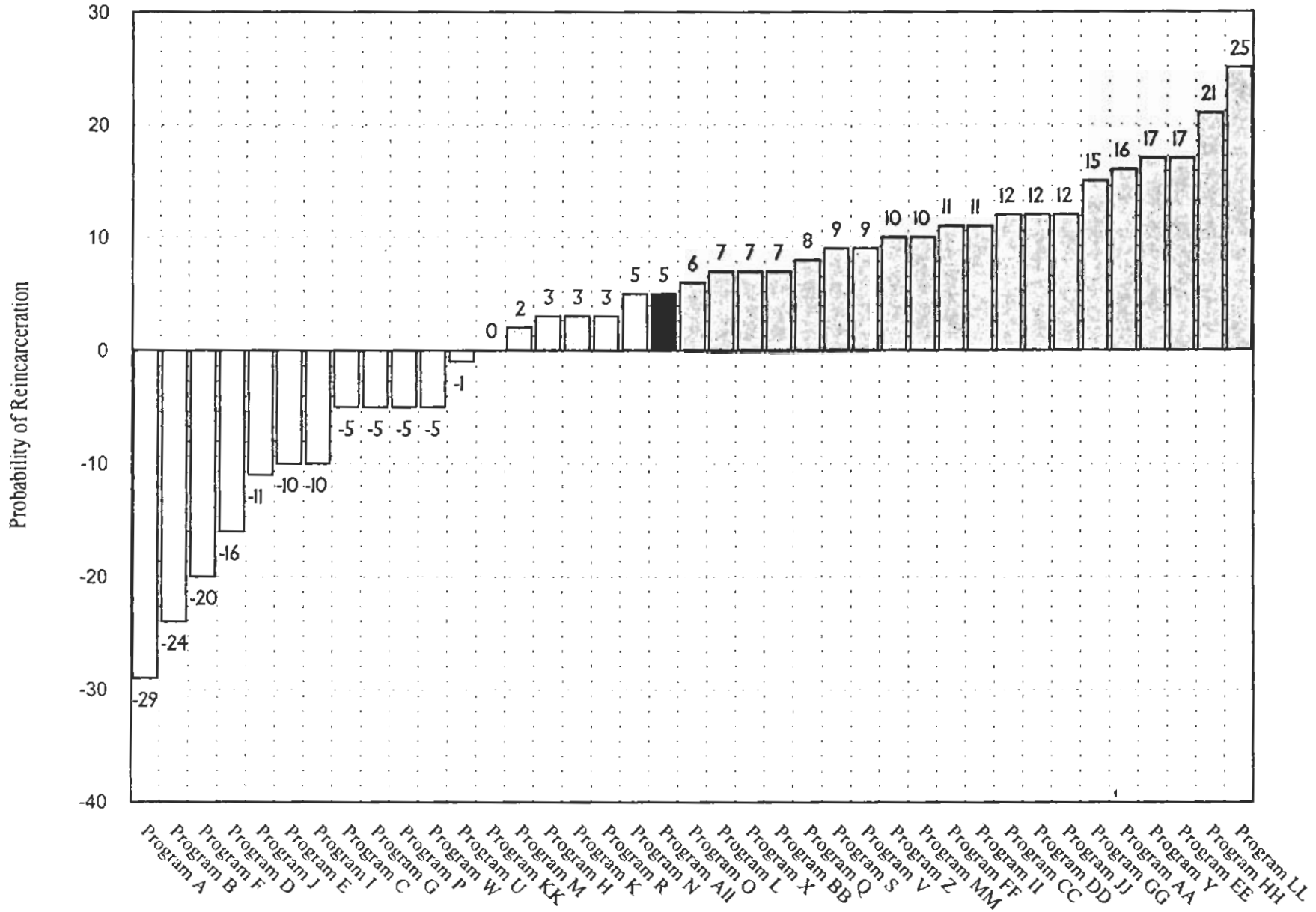


Figure 2. Treatment Effects by Program for Low Risk Offenders

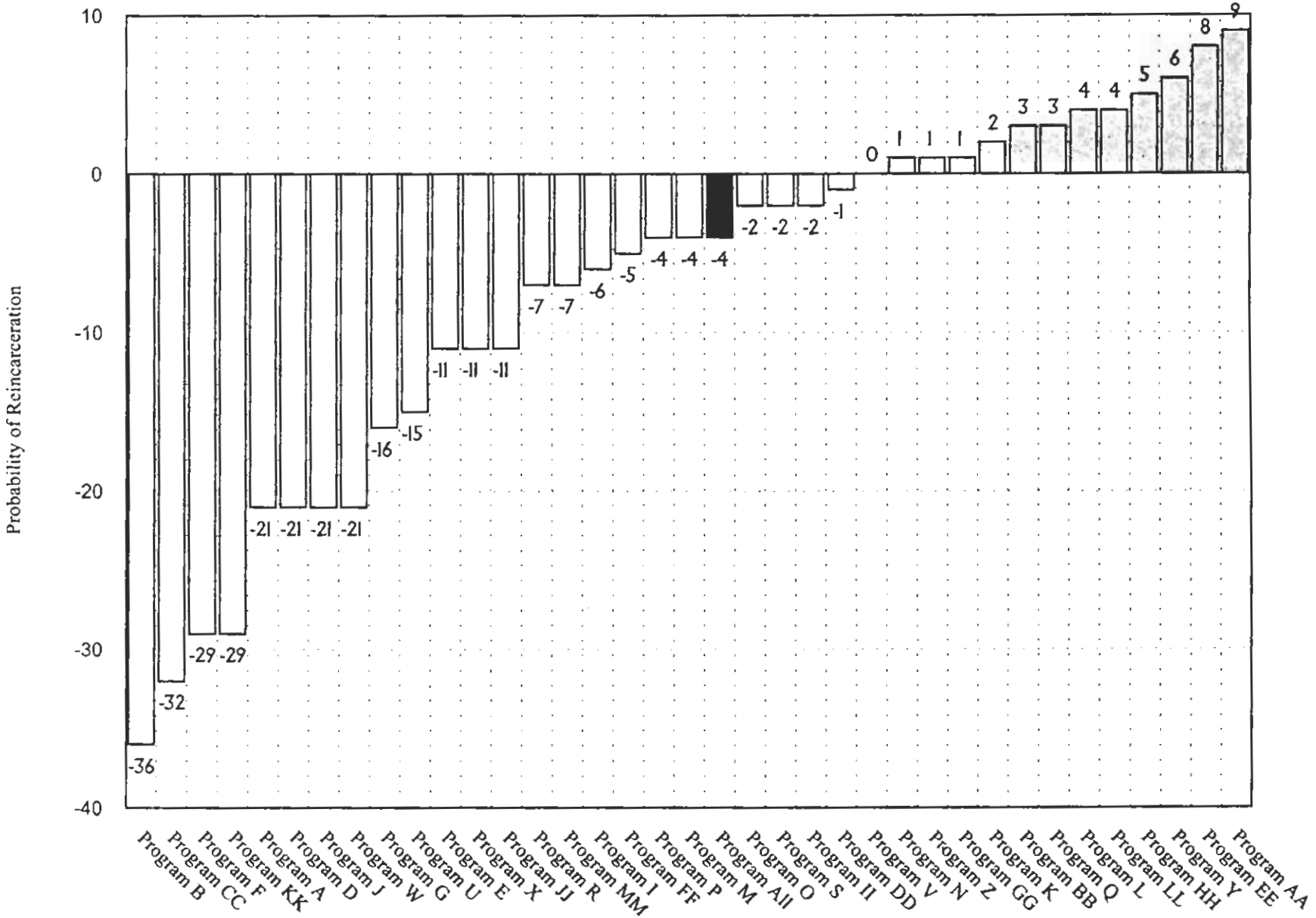


Figure 3. Treatment Effects by Program for Low/Moderate Risk Offenders

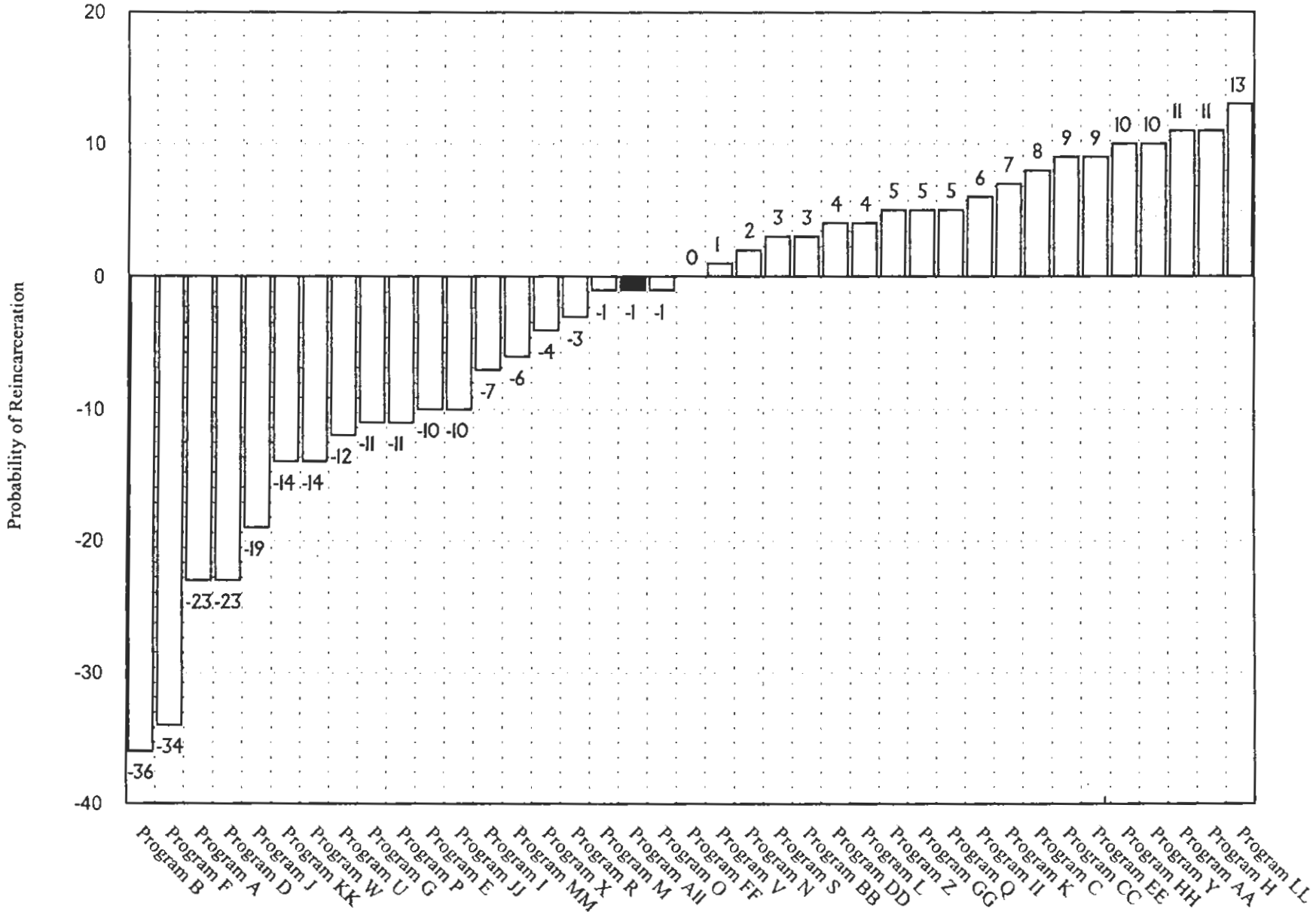


Figure 4. Treatment Effects by Program for Moderate Risk Offenders

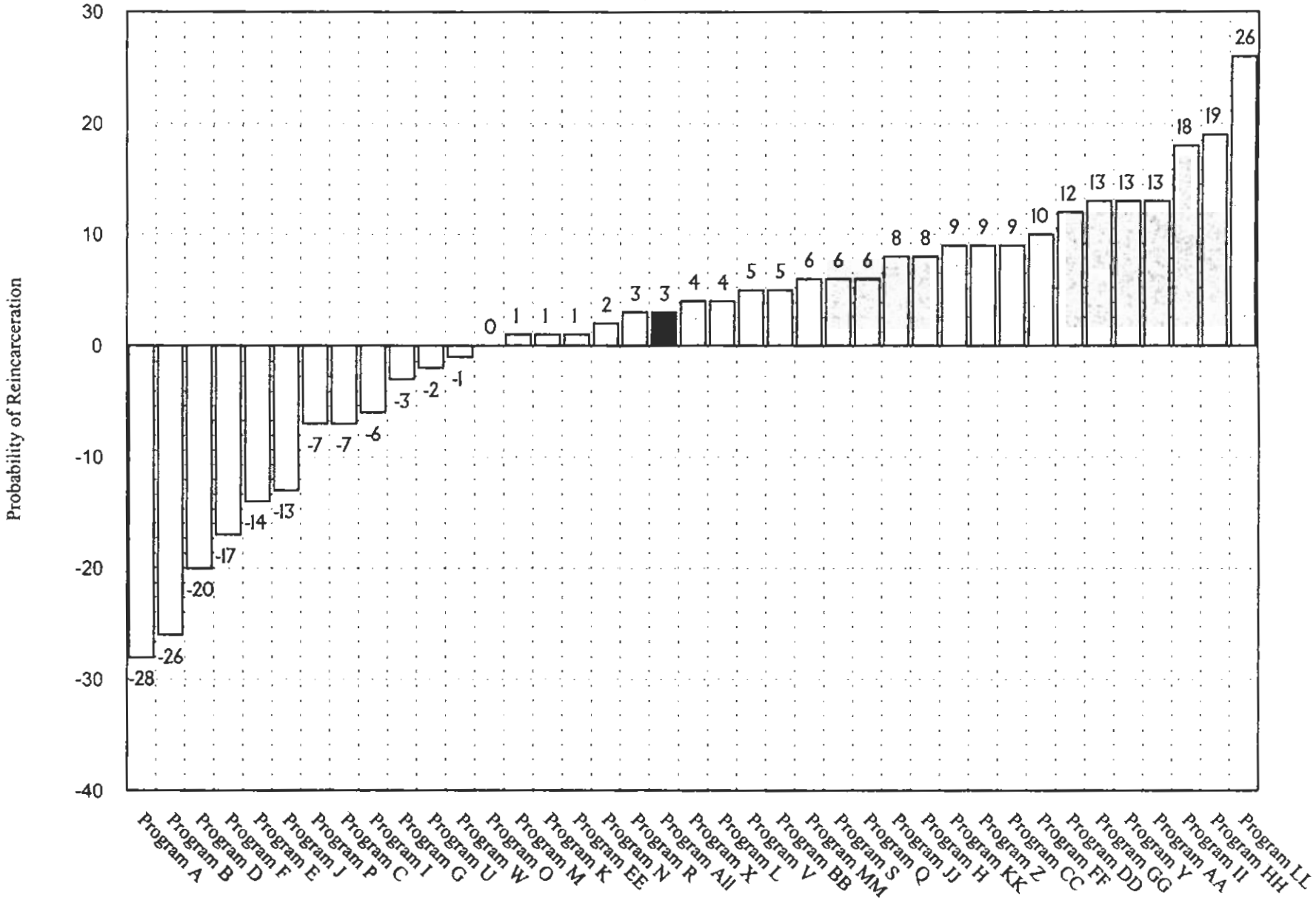
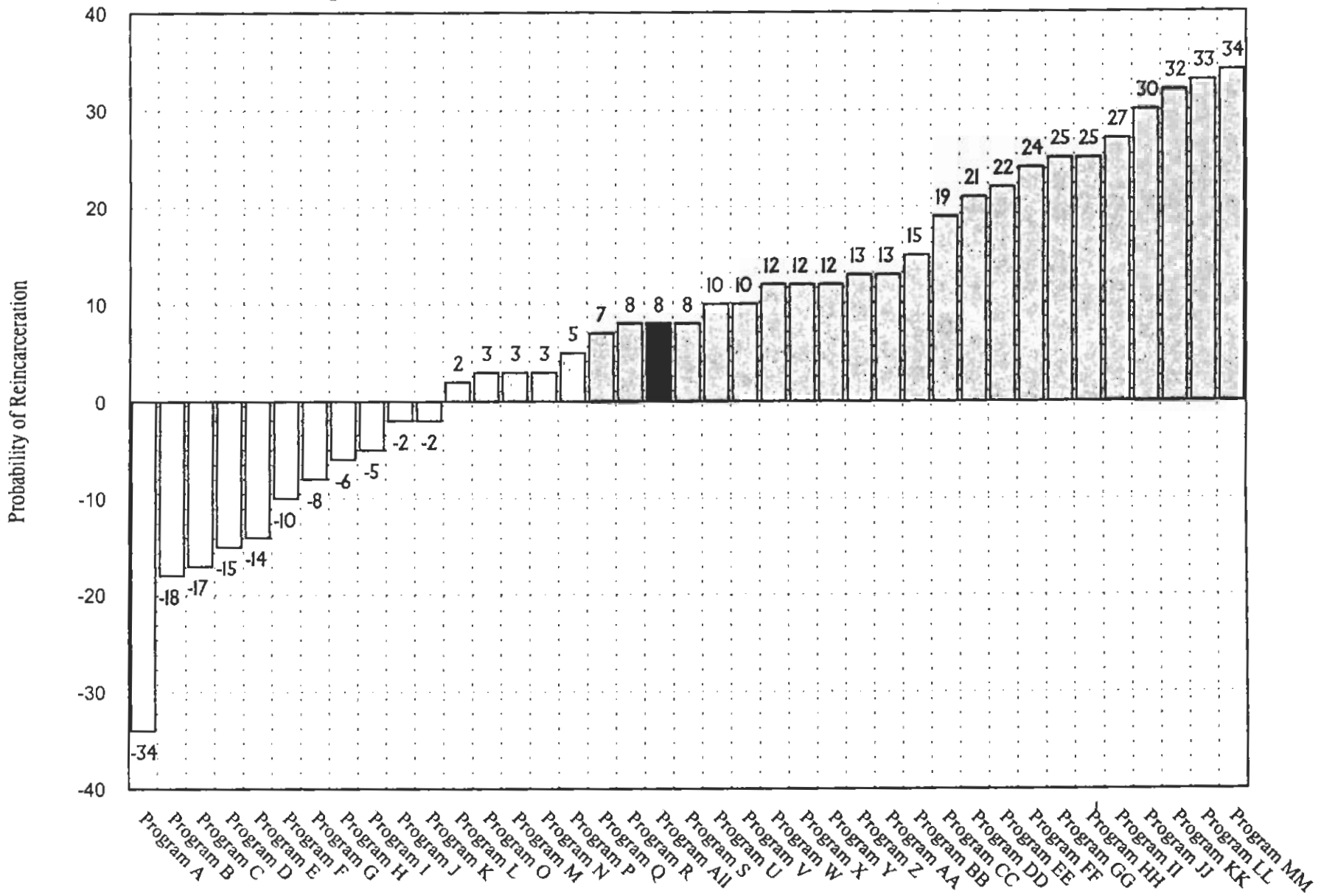


Figure 5. Treatment Effects by Program for High Risk Offenders



The value of the residential programs becomes apparent in Figure 4 which shows the expected changes in the probability of recidivism for moderate risk offenders. Nearly 70% of the programs show a reduction in the probability of recidivism for this group of offenders. The largest reduction is 26 percentage points. The expected reduction in the likelihood of recidivism for moderate risk offenders is 3 percentage points. Still though, 13 programs failed to reduce recidivism or increased recidivism rates for those offenders served by the programs.

Finally, Figure 5 shows the reductions in recidivism rates for the high-risk offenders. Twenty-seven of the programs demonstrate a reduction in recidivism with an overall reduction of 8 percentage points noted for this group of offenders. The reductions in recidivism range from 2 to 34 percentage points. Only 11 programs continue to increase expected recidivism rates for this group.

In summary, the results from this study demonstrate that the effectiveness of residential treatment programs in Ohio differ based on the risk level of the offender being served. More often than not, residential programs increased the recidivism rates of low and low/moderate risk offenders relative to the recidivism rates of the comparison group. These expected increases in the recidivism rates were substantial and lead to question the policy of admitting lower-risk offenders into residential programs; not just in Ohio but across the country at every jurisdictional level.

In contrast, it is apparent from this research that the residential programs under investigation are quite effective with higher risk offenders. Almost 70% of the programs demonstrated effectiveness when considering the moderate and high-risk offenders. Of importance is the fact that the expected reductions in recidivism increased in magnitude and frequency with these two groups of offenders relative to the lower risk offenders. For the entire sample of moderate risk offenders a 3 percentage point reduction was noted while an 8 percentage point reduction was noted for high risk offenders. These reductions in recidivism rates are partially masked by the 4 and 1 percentage point increases seen with low and low/moderate risk offenders when reviewing the programs' overall effectiveness (presented in Figure 1).

The results of this research are critical for the formation of correctional policy. First, it is apparent that lower risk offenders should be excluded, as a general rule, from residential programming. Corrections agencies should make and follow policy that leads to the targeting of higher risk offenders for placement in residential programming.[7] If a program finds that it is receiving lower risk referrals, the program should have alternate programming for lower risk offenders that is more accommodating and sensitive to the disruption in prosocial contacts such programming might cause.

It is apparent that the effects of programming vary across the levels of risk, however, they also vary substantially within each category of risk. The heterogeneity in the reductions in recidivism within each category of risk leads us to believe that there are other factors, aside from risk level, that impact a program's effectiveness. It is also noteworthy that several programs demonstrate no reductions in recidivism regardless of the risk level of offenders. Given this observation, future research should begin to investigate the relationship between other programmatic factors that might impact program effectiveness.

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ENDNOTES

[1] Risk refers to the likelihood of one engaging in subsequent criminal behavior.

[2] Parole and post release control are both periods of supervision served by offenders after their release from prison. However the two differ in that post release control cannot be used as an early release mechanism and applies to offenders who committed crimes on or after July 1, 1996 and are subject to Truth in Sentencing Legislation. Transitional control includes supervision of inmates formerly known as furlough, conditional release and electronically monitored early release program for inmates who are at the end of their prison term.

[3] Community based correctional facilities are four to six month programs that take offenders sentenced directly from the court. These offenders are on probation, however, are higher risk than typical probation samples and more closely resemble parolee samples (see Latessa, Holsinger—first CCA report).

[4] Only those offenders that were successfully terminated from programming were included in the analyses contained in this research. This reduced the number of offenders in the experimental group to 5,268.

[5] Sites where the number of successful terminations was less than 50 were combined, for the purposes of analyses, into a "small programs" group. This reduced the number of programs for individual analyses to 38.

[6] Two programs had no low risk offenders, therefore, expected changes in probabilities were not calculated for these programs reducing the total number of programs with low risk offenders to 36.

[7] One exception might be parole violators. In additional research reported elsewhere, Lowenkamp and Latessa (2002) found residential programming to be effective for parole violators regardless of risk level.