

Are Drug Courts Effective: A Meta-Analytic Review

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The Proliferation and Funding of Drug Courts

Over the last 10 years, the United States' correctional landscape has changed dramatically with respect to the processing and treatment of the drug-using offender. Of particular note has been the rapid, nationwide proliferation of the "drug court." As of 2002, 47 of 50 states had implemented drug courts, while the remaining three states had nearly finalized plans for drug court implementation. In addition, the vast majority of states had drug court programs that had been in operation for at least two years (Office of Justice Programs, 2002). By June 2001, there were nearly 700 drug court programs in operation, serving approximately 226,000 offenders (Office of Justice Programs, 2001).

Although the drug court movement has been and continues to be supported through federal funding, individual states have begun to take over fiscal responsibility. One example of federal support occurred in fiscal year 1999, when the Drug Courts Program Office was given \$40 million in funding for the purpose of drug court development and research (Belenko, 2001). Currently however, 30 states have implemented legislation designed to support the planning, operating, and funding of drug courts (Office of Justice Programs, 2001). Despite the astonishing level of proliferation from one experimental drug court in Dade County, Florida, much needs to be learned regarding the definition of the drug court process, and, more important, the effectiveness of the drug court model.

Reasons for Growth of the Drug Court Movement

The reasons for the growth of the drug court movement have been fairly well documented over the last decade. The three commonly cited reasons for drug court development are:

- The continuation of the criminal justice (and societal) "crack-down" on drug use;
- Increased interest in treatment-based correctional options; and
- Systemic pressure created by over-incarceration of drug-using offenders (Boldt, 1998).

The War on Drugs. The "war on drugs" was a response to perceived and measured increases in the use of illegal drugs. Coupled with increases in perceived drug use was the belief that other illegal activities (crime) were strongly correlated with fluctuations in drug use. As a response, all segments of the criminal justice system were

using offenders (DiMascio, 1997; Finn & Newlyn, 1997; Kleiman & Smith, 1990).

Shift in Case Processing. If nothing else, drug courts represent a shift in case processing, and many attempts over the last several years have been made to conduct "process evaluations" (e.g., Goldkamp et al., 2001; Logan et al., 2000; Senjo & Leip, 2001). During the early 1990s, the rapid and widespread implementation of drug courts generated a perceived need not only for these process evaluations, but also for the development of standards and procedures related to the processes that were identified (Goldkamp, 1995). In addition, the call has also been made for research that can identify

The field of criminal justice, and corrections in particular, has a history of panaceaphilia, an inclination to blindly support the latest and greatest treatment intervention regardless of what is empirically known (or in question) about the program.

called upon to intervene with drug use and trafficking. The result has been that drug control has continued to be at the forefront of both criminal justice policy and public concern (Maguire & Pastore, 1998).

Increased Interest in Treatment-Based Options. Besides the war on drugs, there has been an increased interest in creating treatment-based options for drug-using offenders. Evidence for this lies not only in drug courts' involvement of the community for the enhancement of resources, but also the outgrowth of drug courts into "community drug courts" or "family drug courts" with a more restorative theme (Boldt, 1998; Drug Courts Program Office, 1997; Senjo & Leip, 2001).

Response to Systemic Needs. Finally, the use of drug courts may have resulted as a response to systemic needs presented by the aforementioned shifts in focus toward the drug-using offender. On all counts, toward the end of the 1980s, every level of the criminal justice system (police, courts, and, particularly, correctional institutions) were burdened by issues surrounding drug-

the effectiveness not only of drug courts in general, but of the major components contained within them. Many of the evaluations that have been conducted have been limited in scope, either due to low sample size (e.g., Mullany & Freeman-Wilson, 2002) or lack of an experimental or quasi-experimental design (Goldkamp, 1994).

Effectiveness of Drug Courts

Success in Meeting Some Initial Goals. In 2001, Stephen Belenko conducted a critical review of 37 published and unpublished evaluations of drug court programs (Belenko, 2001). It is fairly clear from his review that drug courts are effective in meeting some of their initial intentions. Specifically, drug courts:

- Garner much support from the community (mobilizing and partnering with local agencies to serve the drug-using offender);
- Offer and provide long-term treatment services to offenders who have long his-

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ories with the criminal justice system, as well as with drug use, treatment failures, and general disenfranchisement; and

- Seem to reduce drug use and criminal activity while offenders are involved in drug court processing and programming (although this is not an uncommon occurrence for a number of different community correctional options).

Long-Term Impacts Less Clear. What is less clear than the appearance of the deliverables noted above are the long-term post-program impacts of drug courts on recidivism and future drug use. Nonetheless, several of the studies reviewed by Belenko indicate an effect size regarding post-program reductions in recidivism. A majority of the studies reviewed found lower recidivism rates for drug court participants. This finding, coupled with within-program measures involving reduced recidivism, has garnered a stamp of approval in many venues regarding the utility and effectiveness of the drug court model (Belenko, 2001).

Problems in Evaluation. The lack of knowledge regarding long-term drug court effectiveness may be attributable to a number of different factors:

- Lack of measurement regarding any number of outcome variables;
- Failure to follow up on drug court participants (particularly once they are out from under the supervision of the criminal justice system); and
- Variation in methodological designs across studies.

Despite these and other potential limitations, drug courts have continued to thrive and proliferate within virtually every jurisdiction within the United States.

Crisis Situation in Social Science Research

Most recently, however, assertions have been made indicating that drug courts in general show little to no treatment effect when examining comparative evaluation research (Anderson, 2001). Given that research in the social sciences is often unstandardized and difficult to digest when taken together, however, it is not uncommon that two traditional literature reviews come to very different conclusions.

As Wolf (1986) notes, the state of research in the social sciences is in a crisis situation. A lack of standardization in measurement and methods has often led to conflicting conclusions when investigating

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Studies Included in the Meta-Analysis

1. Bavon, A. (2001). The effect of the Tarrant County Drug Court Project on recidivism. *Evaluation and Program Planning*, 24, 13–22.
2. Brewster, Mary, P. (2001). An Evaluation of the Chester County (PA) Drug Court Program. *Journal of Drug Issues*, 31(1), 177–206.
3. Fielding, Jonathan, Tye, Grace, Ogawa, Patrick L., Imam, Iraj, Long, Anna M. (2002). Los Angeles County Drug Court Programs: Initial results. *Journal of Substance Abuse Treatment*, 23, 217–224.
4. Goldkamp, John, Weiland, Doris, & Moore, James (2001). The Philadelphia Treatment Court: Its development and impact, the second phase. Philadelphia, PA: Crime and Justice Research Institute. Unpublished manuscript.
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8. Harrison, Linda, Patrick, Diane, & English, Kim (2001). An Evaluation of the Denver Drug Court: The early years 1995–1996. Denver, CO: Colorado Department of Public Safety, Division of Criminal Justice, Research and Statistics. Unpublished manuscript.
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14. Miethe, Terance, D., Lu, Hong, & Reese, Erin (2000). Reintegrative shaming and recidivism risks in drug court: Explanations for some unexpected findings. *Crime and Delinquency*, 46(4), 522–541.
15. Peters, Roger, H., & Murrin, Mary R. (2000). Effectiveness of treatment-based drug courts in reducing criminal recidivism. *Criminal Justice and Behavior*, 27(1), 72–96.
16. Santa Clara County Drug Treatment Court: Two year progress report and outcome comparisons—March 1, 1996 to March 31, 1998 (1998). Retrieved from www.american.edu/publications/santacl.htm.
17. Spohn, Cassia, Piper, R.K., Martin, Tom, & Frenzel, Erika Davis (2001). Drug courts and recidivism: The results of an evaluation using two comparison groups and multiple indicators of recidivism. *Journal of Drug Issues*, 31(1), 149–176.
18. Stageberg, Paul, Wilson, Bonnie S., & Moore, Richard G. (2001). Final report on the Polk County Adult Drug Court. Des Moines, IA: Iowa Department of Human Rights, Division of Criminal and Juvenile Justice Planning Statistical Analysis Center. Unpublished manuscript.

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the same issues and to problems in traditional reviews of the literature. Sometimes, however, it is bias or a misreading of the literature that leads to conflicting conclusions in literature reviews. Many methodologists and researchers now support meta-analytic techniques to overcome the problems and deficiencies associated with traditional literature reviews (see Lipsey & Wilson, 2001, for a review of the strengths and weaknesses of meta-analyses).

Using Meta-Analysis to Evaluate Studies

Both Treatment Effects and Sample Size. Meta-analysis is a statistical technique that synthesizes the findings of many research studies. The significance of such a technique is that it takes into consideration both the treatment effects of each study and the size of the sample included in each study. Therefore, studies that include more participants are given a greater weight that is directly related to the size of the study sample (Lipsey & Wilson, 2001). That such a task is nearly impossible to do accurately when conducting a traditional literature review may help to explain the divergent conclusions found in the literature reviews of drug court evaluations by Anderson (2001) and Belenko (2001).

Study and Program Characteristics and Treatment Effect Size. Another important aspect of meta-analysis is that the technique allows the researcher to investigate the exact nature of the relationship between characteristics of the study, the program characteristics, and the treatment effect size. These types of analyses are quite important when used to inform policy (Lipsey, 1997).

Method of Enquiry

Outcome Evaluations Identified.

Given the questions this research set out to answer, the authors searched several electronic databases for articles on drug court effectiveness. By searching the Social Sciences Citation Index, PsychInfo, the Criminal Justice Periodical Index, Dissertation Abstracts, National Drug Court Websites, and the websites of state and local governmental research agencies, more than 50 articles and reports were identified. Of these 50, only 22 were outcome evaluations that:

- Included a comparison group; and
- Used some measure of criminal behavior as one of the outcome measures.

Three studies included data on multiple samples from different time periods or from different jurisdictions. Two articles provided two comparison groups. In both of these

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- Vito, Gennaro, F., & Tewksbury, Richard A. (1998). The impact of treatment: The Jefferson County (Kentucky) Drug Court Program. *Federal Probation, 62*(2), 46–51.
- Wolfe, Ellen, Guydish, Joseph, & Termond, Jenna (2002). A drug court outcome evaluation comparing arrests in a two year follow-up period. *Journal of Drug Issues, 32*(4), 1155–1172.
- Wright, David, & Clymer, Bob (2001). Beckham County Juvenile Drug Court: Phase II analysis and evaluation. Oklahoma City, OK: Oklahoma Statistical Analysis Center. Unpublished manuscript.
- Wright, David, Clymer, Bob, & Simpson, Debbie (2001) Evaluation of Oklahoma Drug Courts. Oklahoma City, OK: Oklahoma Statistical Analysis Center. Unpublished manuscript.

cases, an effect size using the comparison group that was most similar to the treatment group (based on descriptive statistics presented in the articles) was calculated. Overall, the 22 studies involved in the current analyses included 13,494 offenders.

Each Study Coded. Each study was coded based on its source, year of article or report production, group assignment method, similarity of the comparison group, average age of participants, risk level of participants, drug court program duration, drug court program setting, and length of follow-up (see Table 1). The variables and coding schemes were developed based on measures used in previous meta-analyses (see Lipsey & Wilson, 2001). Although every effort was made to fill in the complete coding form for each study, several studies failed to provide the necessary information or, by aggregating distinct samples and drug courts, made completing the coding form impossible.

Effect Sizes Calculated. Once each study was coded, effect sizes for each independent sample were calculated. The effect size calculated is the logged odds ratio, which is well suited for measuring the relationship between two dichotomous variables.

The odds ratio was calculated with the equation $ES_{OR} = ad/bc$, in which a and b are the number of offenders in the treatment group that were not recidivists (a) or were recidivists (b), and d and c are the number of offenders in the comparison group that were not recidivists (c) or were recidivists (d). Because the odds ratio is centered on 1 rather than zero, which convolutes interpretability, the log of the odds ratio is taken to center the odds ratio effects size on zero with a mean of 0 and a standard deviation of 1.83. The formula for the log odds ratio is $ES_{LOR} = \log_e(ES_{OR})$.

Ratios Converted to Percentage Reductions. Although the logged odds ratio has certain characteristics that make it appealing for meta-analyses, it is not always intuitive. In order to make the logged odds ratios more interpretable, they were converted into percentage reductions in recidivism; to calculate the change in the recidivism rate, the following equation is used:

$$e^{ES_{LOR}/1} + e^{ES_{LOR}} - 0.50.$$

Weights calculated were based on the See *META-ANALYSIS*, next page

Variable	Response Codes
Document type/source	Book, book chapter, dissertation/thesis, article, technical report, conference paper, other
Year of publication	Year report produced
Group assignment method	Random, non-random matched, non-random other
Similarity of comparison group	No differences, differences exist unsure of impact, differences on important characteristics
Average age of participants	29 and under, 30 and over
Risk level	Greater than or less than 50% of participants with a prior arrest or incarceration
Drug court program length	11 months or less, 12 months or more
Drug court program setting	Outpatient, combination of outpatient and residential
Follow-up period	One, two, or three years
Document type/source	Book, book chapter, dissertation/thesis, article, technical report, conference paper, other
Year of publication	Year report produced
Group assignment method	Random, non-random matched, non-random other
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inverse of the effect size variance and were used in all calculations. The formulas for the standard error of the effect size and the inverse variance weight (used to control for sample size) are:

$$SE_{LOR} = \text{SQRT}(1/a+1/b+1/c+1/d); \text{ and}$$

$$W_{LOR} = 1 / SE_{LOR}^2$$

As stated above, the variation in sample size means that the effect sizes must be weighted prior to any calculations. The weight that will be used is the inverse of the effect size variance, which is calculated by using the above two equations. This weighting takes into account the sample size associated with each effect size. The superiority of using the inverse of the effect size variance as the sample weight has been demonstrated elsewhere and is therefore chosen over the use of sample size or some simple derivation of the sample size (for a complete discussion, see Hedges, 1982; Hedges & Olkin, 1985; and Lipsey & Wilson, 2001).

Special Syntax Programs Used. Special syntax programs were used that applied the weights appropriately so as not to inflate the number of cases used in significance tests and standard errors. In addition to calculating the mean effect size for each of the drug court programs under investigation, a number of ANOVA (analysis of variance between groups) models were also calculated. These models provided information on the relationships between the characteristics of the study and participants listed in Table 1 and the effect size. With the ANOVA models, syntax was also used that applied the appropriate weights and maintained the actual number of effect sizes (rather than weights) when calculating tests of significance and standard errors.

It is important to note that the meta-analyses are limited to the research studies that are included in them. While the information presented in this article is of potentially great value, controlled studies of drug courts should undoubtedly continue in an effort to add to the knowledge base about drug courts and effective drug court programming.

Results of Analysis

Frequency Distributions. Table 2 displays the frequency distributions for the measures used in these analyses. It reveals that more than half of the studies found were technical reports, followed by published articles and other sources (unpublished data and an Internet report). It also shows that the majority of studies (58%) were completed in

2001. All but one study used a non-random method of group assignment, and most used comparison groups that were not equivalent to the treatment group (63%). For many studies (24%), significant and substantial differences existed between the treatment and comparison groups (e.g., criminal history, unemployment rates, or age). About half of the studies involved participants whose average age was over 30, used samples in which fewer than half of the participants had a prior record, and indicated that the drug court program was 12 months or longer in duration. Only one-third of the studies reported that treatment was a combination of inpatient and outpatient programming. Finally, 49% of the studies had a follow-up period of between 13 and 24 months, 24% had a follow-up period of less than one year, and 12% had a follow-up period of 25 months or longer.

Effect Size. The descriptive statistics for the effect size associated with drug court programming are contained in Table 3. The mean weighted effect size (logged odds

ratio) is 0.29, which would correspond to a 7.5% reduction in recidivism. Although this reduction is not large, it is not negligible. This 7.5% reduction in recidivism, according to a study completed by the Washington State Institute for Public Policy (1999), is larger than the 6.6% reduction in recidivism needed for taxpayers to “break even” when comparing financial costs and benefits of a drug court. What is interesting to note about the distribution of effect sizes is that they are not homogenous. The effect sizes vary substantially, from negative values indicating increased recidivism for the treatment group, to large positive values indicating reductions in recidivism much larger than the average of 7.3%. Therefore, the next line of inquiry focused on identifying which factors were related to the magnitude of the effect size.

The first bivariate analyses involved an examination of the relationship between the source of the data and the effect size. As indicated in Figure 1, published articles pro-

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Table 2: Descriptive Statistics for Coding Variables

Variable	Frequency	Percent
Document type/source		
Article	10	30
Technical report	20	61
Other	3	9
Year of publication		
1998	2	6
1999	1	3
2000	4	12
2001	18	58
2002	8	21
Group assignment method		
Random	1	3
Non-random matched	10	30
Non-random other	22	67
Similarity of comparison group		
No differences	12	36
Differences unsure of importance	13	39
Important differences	8	24
Age of participants		
Under 30	8	24
30 and over	15	46
Risk level		
Less than 50% w/ prior record	18	55
50% or more w/ prior record	14	42
Drug court program length		
0 to 11 months	6	18
12 or more months	18	55
Drug court program setting		
Outpatient	6	18
Mixed	11	33
Follow-up period		
12 months or less	7	21
13 to 24 months	16	49
25 or more months	4	12

Table 3. Descriptive Statistics for Weighted Effect Size

	Mean	Lower	Upper	Minimum	Maximum
Logged odds ratio	0.29	0.22	0.38	-0.63	1.71
Percentage reduction in recidivism	7.30	5.47	9.39	-15.25	34.55

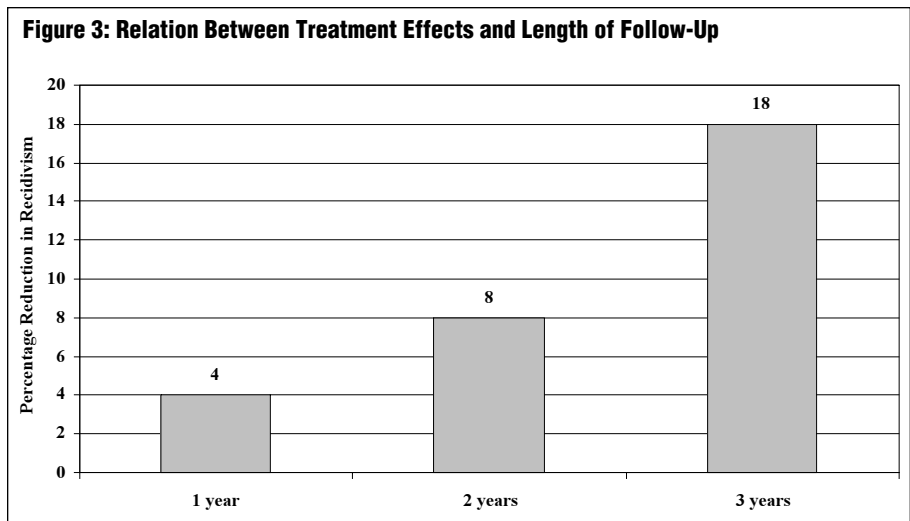
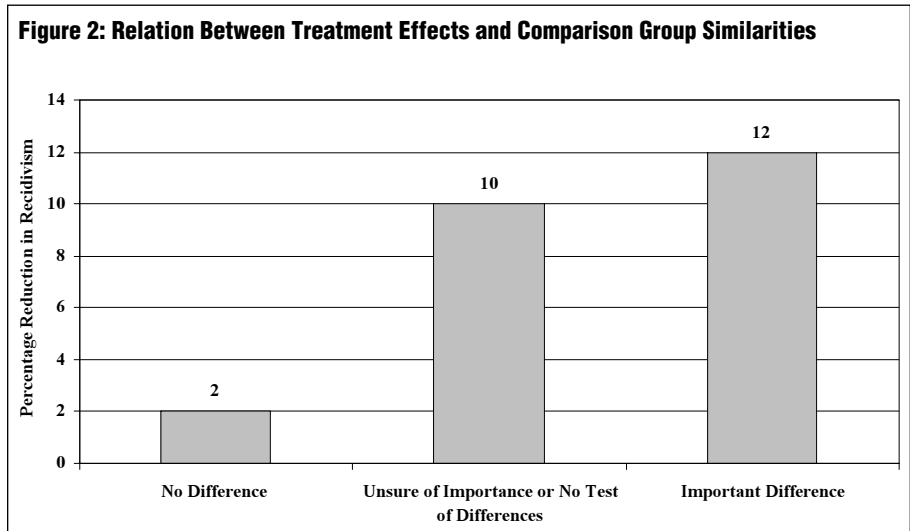
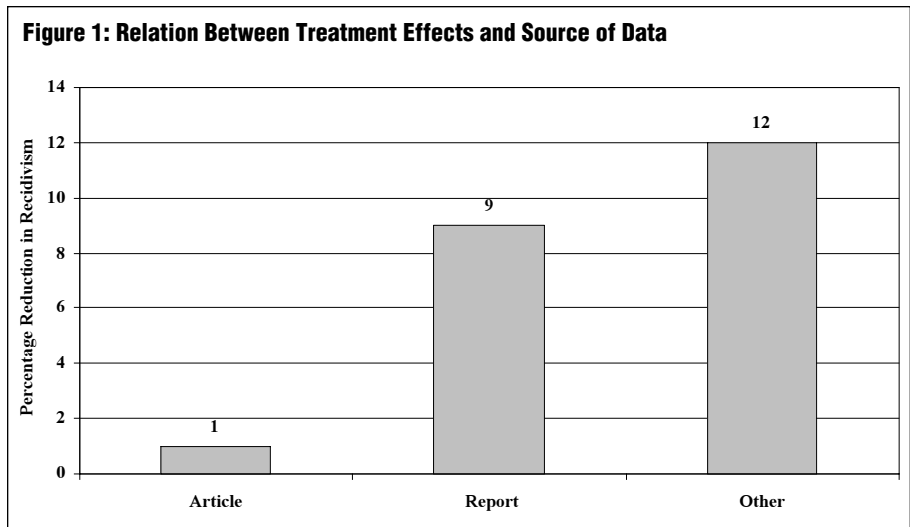
duced the smallest average effect size, followed by technical reports and, finally, by other sources of data. The relationship observed here is most likely a result of other factors associated with the publication process, such as methodology and similarity of the comparison group.

Figure 2 displays the average reductions in recidivism associated with the similarity of the treatment and comparison groups. Note that in studies where there were no differences between the comparison and treatment groups, small reductions (2%) in recidivism were noted. When considering only those studies where a difference was noted but the impact of the difference was unknown or where no measures comparing the two groups were provided, the effect size increases to a 10% reduction. The highest treatment effects were found

The treatment effect seen for drug courts is strongly related to the methodological quality of the study, whether the study was published, the risk level of the sample, and the length of follow-up.

to come from studies where important differences between the treatment and comparison group were observed (e.g., differences in risk, unemployment rates, age, sex).

It should be noted that a cross-tabulation of publication type and differences in the comparison group indicates that 60% of the published studies have equivalent comparison and treatment groups. Only 25% of the technical report studies and 33% of the other sources of data included analyses in which the comparison and treatment groups were equivalent on relevant measures. This finding supports the assertion that it is not publication type that is actually related to effect size, but the other characteristics of studies that are typically associated with the publication process that have impacts on the average effect size. Such an assertion is supported by other meta-analytic reviews and research on the impacts of methodology on research findings (Lipsey & Wilson, 2001; Shadish & Heinsman 1997).



Length of Follow-Up Period. The last significant factor from the methodological characteristics was the length of follow-up. Figure 3 displays the average reductions in recidivism associated with the differing lengths of follow-up periods. Those studies that used a follow-up period of more than

two years demonstrated the greatest reductions in recidivism. Also note that with each increase in follow-up time (from one to two years and from two to three years), there is an increase in average reduction in recidivism. This is a very important and interesting finding. See *META-ANALYSIS*, next page

ing finding and immediately calls into question whether or not the overall effect size noted in this research would increase if extended follow-ups were conducted on each individual study contained herein. More importantly, however, the current findings may indicate that long-term behavioral changes are an outcome of the drug court programs and that these changes do not begin to dissipate within three years.

Program Characteristics and Effect Size. Two characteristics of the drug court programs themselves were analyzed in relation to the effect sizes. Duration of the program (less than one year vs. one year or longer) and program setting (outpatient vs. combination) were coded and analyzed. The analysis indicated that programs that were 0 to 11 months in duration were more effective than programs that were 12 months or longer in duration. This difference was not statistically significant. Similarly, those programs that were categorized as outpatient were slightly more effective than those programs that used a combination of treatment settings. Again, the observed difference for program setting was not statistically significant.

Participant Characteristics. The last two variables examined related to the characteristics of the participants in the study. The first characteristic captures, in a cursory fashion, the risk level of the participants, and the second captures the average age of the participants. Although the analyses indicated that the drug court programs are more effective with younger participants (under 30 compared to 30 and over), this difference was not statistically significant. The other measure relating to the characteristics of the participants—risk level—was a significant predictor and was associated with a doubling of the effectiveness of the drug court programs (see Figure 4). Studies where less than 50% of the participants had a prior record produced an average reduction in recidivism of 5%. This is in comparison to an average 10% reduction associated with studies where half or more of the participants had a prior record. As noted above, the Washington State Institute on Public Policy (1999) indicated that the costs of drug courts were offset once a reduction in recidivism of 6.6% was reached. This information suggests that drug courts are most likely not cost effective for lower risk offenders. A similar conclusion has been reached in traditional literature reviews of the drug court evaluations (see Belenko, 2001).

Some Answers Regarding Efficacy

The current findings may indicate that long-term behavioral changes are an outcome of the drug court programs and that these changes do not begin to dissipate within three years.

Although this meta-analysis contains a limited number of studies and findings, the analyses contained in this research provide some answers to important questions about the efficacy of drug courts. First, it is necessary to echo the sentiments of other reviewers of drug court research who state that the quality and methodological rigor of drug court evaluations are variable and, when these evaluations are taken as a whole, cause some concern. Meta-analyses—including the research reported here—are always limited by the information and methodology of the studies included within them.

Drug Court Participation Associated With Recidivism Reduction. Nonetheless, this meta-analysis provides a mathematical synthesis of a good portion of the outcome evaluation research on drug courts now in existence. A total of 33 findings from 23 sources were included in these analyses. Overall, a 7.3% reduction in recidivism was associated with drug court participation. The effect sizes, as a group, were fairly heterogeneous, ranging from a 15% increase in recidivism to a 35% reduction in recidivism. This information indicates

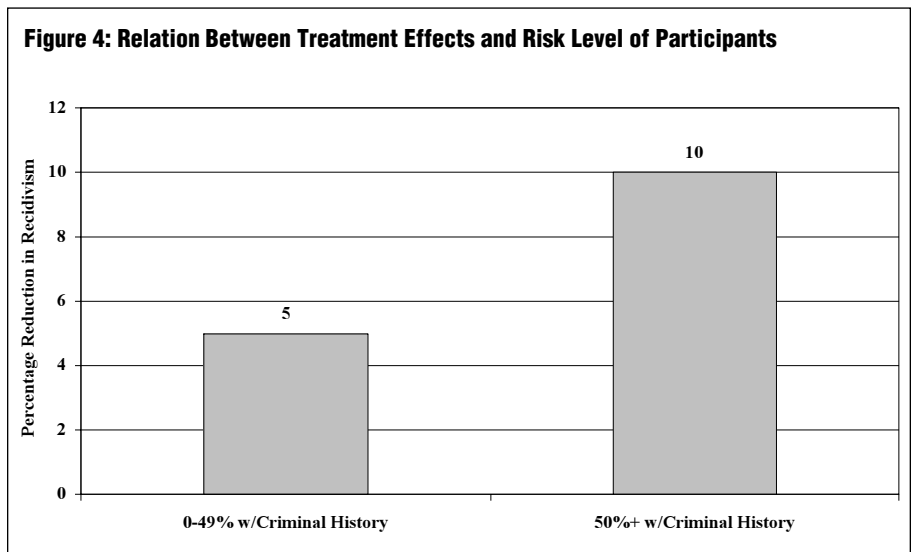
that there are likely characteristics of the studies, the drug court programs, and the participants that relate to treatment effects. The present research was conducted on factors that were both relevant to treatment effectiveness and possible to code for a substantial number of studies.

Data Source and Group Similarity Related to Treatment Effects. The bivariate analyses indicated that the source of data and similarity of the comparison group were significantly related to treatment effects. Studies appearing in journals showed lower average effects, as did studies that had comparison groups that were similar to the treatment group on important characteristics. It is important to note that the journal studies were the ones that were most likely to have comparison groups that were similar to the treatment group. The analyses also found that those studies with longer follow-up periods had greater average treatment effects.

Length of Follow-Up Related to Long-Term Behavioral Changes. Length of follow-up appears to be indicative of long-term behavioral changes that persist longer than the effects associated with other alternate forms of treatment. Another alternate explanation is that the highest risk offenders in both categories are likely to be the first to re-offend, paring the “treatment group” down to include only low- to moderate-risk offenders. It may be the moderate-risk offenders who offend in subsequent years. Perhaps the impacts of drug court programs are strongest among that group of offenders when comparing them to offenders who are processed in the usual way or through alternate means.

Shorter and Outpatient Programs Slightly More Effective. Two measures relating to the drug court programs them-

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selves were investigated in this research. Both the length of the program (under a year and one year or more) and the program setting (outpatient vs. a combination of outpatient and residential) were coded and analyzed. Neither one of these factors proved to be a significant predictor, but the direction of the relationship favored programs of shorter duration (under one year) and those programs that were outpatient rather than a combination of program settings.

Participant Risk Level, but Not Age, Related to Effect. Finally, the characteristics of the participants in the studies were examined to determine if effects differed by these characteristics. Specifically, the risk level of the participants and the age of the participants were considered. Although age (under 30 vs. 30 and over) was not significantly related to drug court treatment effects, the risk level of the participants was. In fact, the effectiveness of drug courts doubled when 50% or more of the drug court participants had a prior record.

Looking Forward

As the database of studies and information on each study continues to grow, it will become more possible to ascertain how these different factors interact and work together to influence drug court treatment effects. For example, based on the direction of the relation between age and effectiveness (non-significant difference favoring the under 30 group), a variable was created that coded those studies in which the participants were high risk and under 30 as opposed to studies that had one such characteristic, and studies that had neither characteristic. Two studies had both characteristics, 16 had one or the other, and four had neither. The two studies that met both criteria reduced recidivism on average by 25%, those that met one or the other criterion reduced recidivism on average by 9%, and those that met none of the criteria increased recidivism by 8%. This is just one example of several that may be examined in the future as the body of literature on drug court effectiveness (both published and unpublished) continues to grow.

These findings are not immediately surprising for two potential reasons:

- First, it is now well established that treatment programs should be reserved for higher risk cases (Andrews et al., 1990; Bonta et al., 2000; Lipsey & Wilson, 1998; Lowenkamp & Latessa, 2002);
- Second, there is now considerable evidence that the aging-out process begins sometime around or shortly after the age of 30. The natural maturation process

could possibly minimize the variation in criminal and substance-abusing behavior.

Overall, this research indicates that drug courts provide a very modest reduction in recidivism at present. This reduction is compromised by programs that fail to target high-risk offenders. It appears from the above analyses that the drug court program is most effective with younger and higher risk offenders. Reductions of over 10% and up to 25% are observed when focusing on these groups. These conclusions must be tempered by the small number of analyses included in this research and the fact that the quality of the research on drug court programs is, overall, of poor methodological quality.

In the future, the database of drug court studies used in the current analyses will be increased. In addition, attempts will be made (as they become possible) to code for such characteristics as:

- Type of treatment provided (e.g., curriculum);
- Theoretical basis of treatment;
- Involvement of the drug court judge;
- Intensity of treatment; and
- Other factors that may relate to the quality and integrity of the treatment.

It may also be possible to code for additional methodological factors and characteristics of the comparison groups. This may, in turn, lead to more definitive answers about the effectiveness of drug courts through the provision of ongoing meta-analytic reviews of the drug court research.

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