

A DRUG COURT OUTCOME EVALUATION COMPARING ARRESTS IN A TWO YEAR FOLLOW-UP PERIOD

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Since the first drug court in Miami in 1989, the drug court movement has spread throughout the United States, influencing how drug-involved offenders are treated in the criminal justice system. This paper reports on an outcome evaluation of a drug court in San Mateo County, California. Arrest rates were compared for drug court participants (N=618) and nonparticipants (N=75), and for graduates (N=257) and nongraduates (N=361). Factors associated with rearrest were assessed for participants in both groups. During a two-year follow-up period, there were no significant differences in rearrest rates between the participant and non-participant groups. Comparisons between graduates and nongraduates showed lower rearrest rates for graduates (19% vs. 53%, $\chi^2(1)=73.5$, $p < 0.01$). In a model including participants and nonparticipants, only a prior history of conviction predicted an increased likelihood of rearrest whereas being female and older decreased the likelihood of rearrest. In addition, among drug court participants only, graduating decreased the likelihood of rearrest.

INTRODUCTION

The first drug court began in Miami in 1989 (Belenko, 1998) and since then, over 650 drug courts have been established throughout the country, 101 of which are in California (Deschenes, Peters, Goldkamp, & Belenko, in press). Goldkamp, White, and Robinson (2001) describe the drug court model as a “paradigm shift away from a predominantly punitive orientation to one that focuses on treatment,

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investment in human potential, second (and third) chances, and restoration” (p.28). In 1997, the National Association of Drug Court Professionals, supported by the Drug Courts Program Office, created a document that defined drug courts by identifying 10 key components (Drug Courts Program Office, 1997). These components include the integration of drug and alcohol treatment services with the judicial system; a nonadversarial approach; early identification and placement of eligible participants; access to a full continuum of services; monitoring of abstinence; coordination of strategies to address compliance issues; judicial involvement and interaction with participants; ongoing monitoring and evaluation of goals; continuing educational opportunities for all drug court team members; and development of partnerships among courts, the community and related organizations.

The innovation of the drug court model, and the fact that each court has been established and run somewhat differently, presents unique challenges to evaluators and others who want to know whether drug courts work, and whether they work better than traditional criminal courts. Belenko (1998, 1999), reviewing over 50 drug court evaluation reports, found that drug courts provide closer and more comprehensive supervision of drug offenders, maintain drug offenders in treatment, and provide more services to offenders. Results show that drug use and criminal behavior is decreased while in drug court and that graduates have lower rearrest rates than comparison groups or drug court participants who leave the program before graduation.

In 1998, the Office of Justice Programs Drug Court Clearinghouse reviewed information provided by drug courts operating in the United States (American University Drug Court Clearinghouse and Technical Assistance Project, 1999). Findings from this review include drug court retention rates (calculated as total graduates plus active participants) of between 65% and 85%, reductions in drug use while in drug court, and lower rearrest rates (from 2% to 20% lower) for participants in drug court. Drug court participants, nationwide, were more likely to be male, over 30 years of age, and single, divorced, or widowed. Most of the drug court participants had used drugs for more than 15 years, used multiple drugs including alcohol, and 25% had been in drug treatment in the past. Women were more likely to graduate if women-focused services were offered through the drug court (e.g., day care, women’s groups). Other studies have presented graduation rates from 35% to 54% but have varied from as low as 1% to as high as 70% (U.S. General Accounting Office, 1997). In an evaluation of the Maricopa County program, the authors noted a recidivism rate of 11% for participants in treatment compared to 18% of those who refused treatment (Hepburn, Johnston, & Rogers, 1994).

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Most evaluations investigate whether drug courts reduce crime, decrease drug use, and save money. The styles of evaluation usually compare graduates to nongraduates or drug court participants to nonparticipants. Comparing graduates to nongraduates has been criticized because it basically shows that successful people succeed and failures fail (Goldkamp, White, & Robinson, 2001). Identifying an adequate nonparticipant group is also difficult and, once identified, often does not represent a true comparison. However, in the absence of randomized prospective cohort studies there are few evaluation design alternatives available. As a result, few studies have been published in peer-reviewed journals and information about effectiveness is generally less accessible. In reviewing the Drug Court Publications Resource Guide (National Drug Court Institute, 2000), less than 20% of publications listed in the research and evaluation subsection have been published in peer-reviewed journals. Peters, Haas and Murrin (1999) described the importance of continuing efforts to publicize findings from evaluations of drug courts so that information is accessible to those who are in positions to create and/or refine drug court operations.

This report reflects the results of an outcome evaluation of the Southern San Mateo County Drug Court in its first three years of operation. The evaluation design included comparisons between drug court participants and nonparticipants, and between graduates and nongraduates of the drug court. The main outcome measure was rearrest during a two-year follow-up period for drug court participants and nonparticipants.

METHODS

BACKGROUND OF THE SAN MATEO DRUG COURT

The first San Mateo County Drug Court began in South County in October 1995 as a cooperative agreement among the district attorney, sheriff's office, probation department, alcohol and drug services, health services, and the San Mateo County Bar Association's Private Defender and Own Recognizance Programs. The goal of the drug court was to address drug abuse recidivism and court and jail crowding by changing how drug offenders were dealt with in the system. The Southern San Mateo County Drug Court is both a pre-plea and post-plea program with diversion and trial tracks. In the diversion track, eligibility criteria include nonviolent, first-time offenders charged with specific drug offenses as defined in Penal Code 1000.5. The trial track is geared towards defendants who are charged with drug offenses and do not qualify for diversion but would benefit from a treatment approach. Eligibility criteria for the trial track include: cases where the defendant is charged with a diversion violation, nondiversion-eligible cases where the defendant is charged with 11377 HS and/or 11350 HS offenses, and cases where the defendant

is charged with a probation violation (except when the violation is for failure to serve a sentence).

THE DRUG COURT PROCESS

Own Recognizance Program (OR) staff screen all defendants booked into the San Mateo County Jail for eligibility to participate in drug court. Drug court rules require that participants appear in court, attend scheduled meetings with caseworkers, submit to urine testing, attend all ordered treatment sessions, be punctual for appointments, make no threats against staff or participants, and do not possess drugs, alcohol, or weapons. Violation of these rules results in graduated sanctions. Common violations include - positive urine tests, failure to attend a class or counseling session, failure to comply with contract requirements, and/or an arrest for a new drug offense. Sanction for these violations include increased level of drug treatment, time in a detoxification program, placement in another drug/alcohol program, time in jail, or termination from drug court. The usual time from drug court entry to drug court completion (graduation) is 12 months.

THE TREATMENT PROCESS

All persons in drug court receive a complete substance abuse assessment by alcohol and drug services staff. In both the diversion and trial track, there are three phases of treatment. In phase I, drug court participants are placed into treatment as soon as possible (usually within six weeks) and remain in treatment for at least six months. If participants remain drug free for three months and meet all of the requirements in phase I, they move on to the next phase. In phase II, the requirements are semimonthly urine samples, semimonthly meetings with probation, attendance at 12-step meetings or other community counseling sessions, follow-up on medical needs, participation in job counseling, GED or education/literacy classes, and treatment attendance. Participants who remain drug free and show progress are advanced to phase III. In this phase, participants supply urine samples when requested, attend weekly counseling sessions, and continue job counseling and education classes.

OUTCOME EVALUATION DESIGN

San Mateo County Alcohol and Drug Services contracted with a university-based research institute, and the university's institutional review board approved all evaluation procedures. The outcome evaluation was designed to answer three questions: (1) Do outcomes differ between drug court participants and nonparticipants (comparison group) within a two-year follow-up period? (2) Do outcomes differ for graduates compared to nongraduates? (3) What factors predict

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the likelihood of rearrest? A retrospective cohort design was utilized to study the first three years (November 1, 1995, to October 31, 1998) of the southern drug court. The San Mateo County Bar Association Release on Own Recognizance (OR) Program provided data used in these analyses.

SAMPLE

The drug court group consisted of all persons (618 cases) deemed eligible and referred to the southern drug court from November 1, 1995, through October 31, 1998. The comparison group consisted of persons who were processed through the superior court between January 1, 1995, and April 30, 1995, a time period prior to the start of the drug court program. Persons included in the comparison group were those who would have met the eligibility criteria for drug court participation (75 cases). Rearrest data were obtained for the two years after the end of supervision for each drug court participant. The length of supervision varied according to whether or not they were in trial or diversion track. For the trial track, supervision ended with the disposition of the initial arrest which included all time spent since the initial arrest and up to three years of probation. For diversion track, supervision would end after approximately 18 months. Nonparticipants were followed for two years from the disposition of their initial arrest that occurred between January 1 and April 30, 1995.

DATASET

Data were obtained from the OR program database, the drug court database, and the San Mateo County Criminal Justice Administration Information System. OR program staff extracted individual data elements from these datasets and assembled them to create client level records for each study participant. The assembled datasets, stripped of any personal identifiers, were provided to the evaluation team for analysis.

ANALYSIS PLAN

There were three aims to the analysis: first, to determine baseline characteristics and comparability between drug court participants and nonparticipants, graduates and nongraduates; second, to assess whether outcomes differed between drug court participants and nonparticipants, graduates and nongraduates; and third, to predict rearrests. We first performed bivariate analyses between the groups for comparability on demographic measures and criminal justice measures at baseline. We then conducted bivariate comparisons between groups on outcome variables that included rearrest, type and severity of charge and disposition of rearrests. We then selected rearrest (coded yes/no) as the single most important outcome measure and assessed

predictors of rearrest using multiple logistic regression and controlling for observed group differences at baseline.

In supplementary analyses, we investigated two issues that may affect the results achieved. First, a number of cases in the drug court participant dataset had initially entered drug court but were later excluded for administrative or eligibility reasons ($n = 114$). Following an intention-to-treat analytic strategy, these cases were retained in the main analyses. An intention-to-treat analysis compares groups based on their original assignment, regardless of whether they received the intervention being studied (Grady, Cummings, & Hulley, 2001). Although this approach may underestimate the effect of the intervention, it protects against the results being biased. In supplementary analyses, drug court participants who were deemed ineligible were excluded from the analyses. If including and excluding this group of participants yielded similar results, it would increase the confidence of our findings. Second, because any new drug court is likely to be less effective during its first year of operation, we identified those cases served during the first year ($n = 185$). In supplementary analyses we used logistic regression (predicting likelihood of rearrest for drug court participants and nonparticipants, predicting likelihood of rearrest for graduates and nongraduates) first dropping the excluded cases, then dropping the first year drug court cases, and finally dropping both the excluded cases and the first year drug court cases.

RESULTS

The results are presented, first, as a comparison between drug court participants and nonparticipants and graduates and nongraduates utilizing bivariate analyses of demographic and criminal justice characteristics at baseline. Next, are the results of bivariate analyses comparing recidivism and type and severity of rearrest. Third, are the multiple logistic regressions predicting the likelihood of rearrest among participants and nonparticipants, and among graduates and nongraduates. Lastly, results of supplementary analyses are reported, which investigate whether dropping drug court exclusions or first year drug court cases affected the main findings.

DESCRIPTION OF SAMPLE – BIVARIATE ANALYSES

Table 1 summarizes the bivariate comparisons between drug court participants and nonparticipants, and between graduates and nongraduates. The groups were similar in terms of age and gender. The groups were significantly different on ethnicity when comparing participants and nonparticipants ($\chi^2(3) = 11.5, p < 0.01$), and comparing graduates and nongraduates ($\chi^2(3) = 11.56, p < 0.01$). Drug court participants were more likely to be White (58% vs. 49%), and nonparticipants were more likely to be African American (24% vs. 13%) and Hispanic (24% vs. 19%).

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There was a significant difference in primary language between drug court participants and nonparticipants ($\chi^2(1) = 14.83$, $p = 0.001$). Drug court participants were more likely to speak English as a primary language (96% vs. 86%). Graduates were more likely to be White and Hispanic, less likely to be African American. Information about children, pregnancy, marital status, and year of entry into drug court were available for the drug court group only. However, none of these variables were significantly different between graduates and nongraduates.

Table 2 summarizes criminal justice variables, including past history, initial arraignment charges, and disposition of arrest. The drug court participant and nonparticipant groups were significantly different when considering prior history of felony and misdemeanor convictions, and severity of arraignment charges. The drug court group was less likely to have any prior conviction ($\chi^2(1) = 2.98$, $p = 0.08$), any prior felony ($\chi^2(1) = 4.66$, $p = 0.04$) or misdemeanor ($\chi^2(1) = 3.87$, $p = 0.05$) convictions, and less likely to have a felony charge at arraignment than the nonparticipants ($\chi^2(1) = 11.5$, $p = 0.0007$). Arraignment charges were categorized into four groups, based on descriptions of the violation: drug charges, violence/weapon charges, property charges, and other. Virtually all participants and nonparticipants had drug charges at their initial arraignment. Forty percent of nonparticipants entered diversion, and 51% were sentenced as a result of their initial arrest. For drug court participants, 42% graduated from drug court, 23% failed to appear in court, and 11% failed to complete their drug treatment program. A total of 114 drug court participants (19%) were excluded from drug court, after initially being accepted, because of resident status and/or prior history that, once discovered, cancelled their eligibility for drug court participation. Graduates differed from nongraduates in only one area; graduates were more likely to have had a prior drug felony than nongraduates ($\chi^2(1) = 3.75$, $p = 0.05$).

Additional analyses were performed comparing graduates and nongraduates (data not shown). Graduates clearly spent a significantly longer time being supervised than nongraduates (mean 410.7 days compared to 84.1 days, $t = -39.43$, $p = 0.0001$). Graduates spent significantly fewer days in pretrial custody than nongraduates (mean 2.87 days compared to 4.44 days, $t = 4.26$, $p = <0.0001$). Graduates received more sanctions than nongraduates (mean number of sanctions 0.68 compared to 0.51, $t = -2.48$, $p = 0.01$) and were more likely to be employed when released from the program (59% compared to 46%, $\chi^2(1) = 9.29$, $p = 0.002$). There was not a significant difference for the graduates and nongraduates in the drug court track: diversion track 84% compared to 78%, trial track 16% compared to 22%, respectively.

Table 3 reports bivariate analyses of outcome variables. Drug court participants were followed for two years from the end of supervision of their initial drug court arrest. Nonparticipants were followed for two years from the disposition of their

TABLE 1

DESCRIPTION OF DRUG COURT PARTICIPANTS AND NONPARTICIPANTS, GRADUATES AND NONGRADUATES

<i>Variable</i>	<i>Drug Court Participant (N=618)</i>	<i>Non-participant (N=75)</i>	<i>Graduate (N=257)</i>	<i>Non-graduate (N=361)</i>
Ethnicity				
Black	13%	24%*	8%	16%*
Hispanic	19%	24%	21%	18%
White	58%	49%	63%	55%
Other	10%	3%	8%	11%
Primary Language				
English	96%	86%*	96%	96%
Spanish	4%	14%	4%	4%
Gender				
Female	29%	24%	33%	27%
Male	71%	76%	67%	73%
Mean Age, years				
(SD)	31.09 (9.2)	31.95 (8.4)	30.98 (8.59)	31.42 (9.23)
Children^(a)				
Women	38%	-----	39%	37%
Men	40%	-----	43%	38%
Men	60%	-----	57%	62%
Pregnant				
	4%	-----	<1%	2%
Marital Status^(b)				
Single	69%	-----	68%	70%
Married	14%	-----	15%	13%
Separated, divorced	17%	-----	17%	17%
Drug Court Year				
1995-96	30%	----	28%	31%
1996-97	35%	----	35%	35%
1997-98	35%	----	37%	34%

^(a) Of those with children, the proportion of men or women with children^(b) More than 50% missing for the non-participants, 8% missing for drug court participants

* p value < 0.01. Ethnicity analyzed as a 2x4 chi square table.

TABLE 2
CRIMINAL JUSTICE DESCRIPTORS FOR DRUG COURT PARTICIPANTS AND NONPARTICIPANTS,
GRADUATES AND NONGRADUATES

<i>Variable</i>	<i>Drug Court Participant (N=618)</i>	<i>Non-participant (N=75)</i>	<i>Graduate (N=257)</i>	<i>Non-graduate (N=361)</i>
Prior Convictions				
Any conviction ^(a)	33%	43%	30%	35%
Felony	3%	8%*	3%	3%
Misdemeanor	29%	40%*	26%	31%
Prior Drug Convictions				
Any conviction ^(b)	14%	19%	13%	15%
Drug Felony	2%	5%	15%	3%*
Drug Misdemeanor	11%	16%	10%	12%
Severity of Initial Arraignment Charge				
Felony	40%	60%*	39%	40%
Misdemeanor	60%	40%*	61%	60%
Disposition of Initial Arrest				
Dismissed	1%	8%	-----	2%
Failure to Appear	23%	1%	-----	32%
Diversion	-----	40%	-----	40%
Sentenced	-----	51%	-----	7%
Excluded ^(c)	19%	-----	-----	19%
Failed treatment	11%	-----	-----	-----
Graduated	42%	-----	-----	-----
Withdrew	4%	-----	-----	-----

^(a) Proportion of participants, non-participants, graduates, or nongraduates with any, felony or misdemeanor prior convictions

^(b) Proportion of participants, non-participants, graduates, or nongraduates with any, felony or misdemeanors prior drug convictions

^(c) The excluded category was for clients who, after initial acceptance into drug court, were deemed ineligible. Examples: non-San Mateo County resident, prior criminal history eliminating eligibility for drug court

* p value ≤ 0.05

initial arrest, which occurred between January 1 and April 30, 1995. Although not statistically significant, the drug court group had a lower average number of rearrests (1.8 compared to 2.0 for nonparticipants) for those arrested; however, there was no significant difference in the proportion that was rearrested between the groups. The drug court group was also less likely to be rearrested for a felony compared to nonparticipants, although this difference was not significant. There was no significant difference in the average length of time to first rearrest between participants and nonparticipants. There was a statistically significant difference when graduates and nongraduates were compared. The rearrest rate for graduates was 19%, compared to 53% for nongraduates ($\chi^2(1) = 73.5, p < 0.0001$). Nongraduates also had a significantly shorter mean time to first rearrest compared to graduates ($t = -2.13, p = 0.04$).

Another analysis was performed to determine if there were differences between groups in terms of the type of charge (drug, property, violence/weapon, other) for the rearrest and its severity (felony, misdemeanor). There were no significant differences between groups on these measures.

MULTIPLE LOGISTIC REGRESSION ANALYSIS OF ARREST OUTCOMES

To assess whether drug court participants were less likely to be arrested than nonparticipants, we used logistic regression techniques to predict the likelihood of rearrest for these groups, while controlling for baseline differences between the groups on demographic and criminal justice measures. The model (Table 4) included whether or not participants were involved in drug court, age, ethnicity, gender, prior history of any convictions, and whether the original arrest charge was a felony or misdemeanor. This model only explained 5% of the variance ($R^2 = 0.05$). Controlling for other factors, only having a prior conviction increased the likelihood of being rearrested. Being female and being older each decreased the likelihood of being rearrested, controlling for all other factors. Drug court participation was not associated with a lower likelihood of rearrest once other factors were included in the analysis.

To assess whether graduates were less likely to be rearrested than nongraduates, we used logistic regression techniques to predict the likelihood of rearrest for these groups, while controlling for baseline differences between the groups on demographic and criminal justice measures. The model (Table 5) included whether or not the participant had graduated, age, ethnicity, gender, marital status and whether they were in the diversion or trial track. Also included in the model were history of prior convictions, severity of charge at arraignment, days in pretrial custody, year of participation in drug court, number of sanctions received in drug court and whether they were employed when released. Similar to the analysis comparing drug court

TABLE 3
TWO YEAR FOLLOW-UP OF RECIDIVISM VARIABLES COMPARING DRUG COURT PARTICIPANTS AND
NONPARTICIPANTS, GRADUATES AND NONGRADUATES

<i>Variables</i>	<i>Drug Court Participant (N=618)</i>	<i>Non-participant (N=75)</i>	<i>Graduate (N=257)</i>	<i>Non-graduate (N=361)</i>
Rearrest^(a)				
Percent rearrested	39%	37%	19%	53%**
Mean number of arrests /arrestee (SD)	1.8 (1.07)	2.0 (1.56)	1.69 (1.10)	1.85 (1.07)
Mean days to first rearrest (SD)	277.24 (197.75)	286.96 (219.34)	355.43 (199.05)	280.78* (215.82)
Rearrest Charges				
Drug	60%	55%	62%	59%
Property	11%	15%	11%	12%
Violence/Weapon	10%	15%	8%	10%
Other	19%	15%	19%	19%
Severity of Rearrest Charges				
Felony	28%	34%	24%	28%
Misdemeanor	72%	66%	76%	72%
Disposition Rearrests				
Dismissed	27%	20%	26%	29%
Sentenced	66%	78%	67%	63%
Consolidated, remanded, failure to appear, other	7%	2%	7%	8%

^(a) Rearrest data available only for San Mateo County rearrests

* p value ≤ 0.05

** p value < 0.01

participants and nonparticipants, having a prior conviction was the only variable that increased the likelihood of rearrest, controlling for other factors. However, graduates were significantly less likely to be arrested, as were those who were older. The additional information available for graduates and nongraduates (e.g.,

TABLE 4
LOGISTIC REGRESSION MODEL PREDICTING REARREST AMONG DRUG COURT PARTICIPANTS AND NONPARTICIPANTS

<i>Variable</i>	<i>Odds Ratio</i>	<i>95 % C.I.</i>	<i>p value</i>
Older age	0.96	0.95, 0.98	<0.0001
Female	0.65	0.46, 0.94	0.02
African-American	1.46	0.87, 2.44	0.15
Hispanic	0.90	0.58, 1.39	0.63
Other ethnic groups	0.95	0.54, 1.67	0.85
History of any prior convictions	1.96	1.40, 2.77	<0.0001
Felony charge at initial arraignment	0.80	0.55, 1.14	0.21
Drug Court participant	1.15	0.69, 1.92	0.60

Reference group is younger age, male, White, no prior convictions, misdemeanor charge at arraignment, and non-Drug Court participant.

employed when released, sanctions) did allow for a greater understanding of what might predict rearrest, as this model explained about 20% ($R^2 = 0.20$) of the variance.

SUPPLEMENTARY ANALYSES

The logistic regression analysis designed to assess whether rearrest rates were lower for drug court participants than for nonparticipants (Table 4) found no difference between these groups for rearrest rates. In supplementary analyses we further investigated this finding by sequentially removing three groups from the drug court sample, and reanalyzing the data. First, participants who entered the drug court and were subsequently excluded for administrative or eligibility reasons were removed. The rationale was that those who were excluded in this way ($n = 114$) possibly should not have entered the drug court, or they may have received only a small amount of the drug court intervention. In either case, if they had poorer outcomes than the remaining drug court participants, then their inclusion in the analysis would negatively bias study results.

Second, participants who entered the drug court during its first year of operation were removed ($n = 185$). The drug court may have been less effective during its initial year of operation. Participants during this year may have had poorer outcomes than later participants, and their inclusion in the analysis may negatively bias study results. Third, both the excluded group ($n = 114$) and the first year participants ($n = 185$) were excluded to remove both potential sources of bias. Removing these respective groups from analysis did not change the pattern of results, meaning that

TABLE 5
LOGISTIC REGRESSION MODEL PREDICTING REARREST AMONG GRADUATES AND NONGRADUATES

<i>Variable</i>	<i>Odds Ratio</i>	<i>95% C.I.</i>	<i>p value</i>
Older Age	0.96	0.93, 0.98	0.0005
Female	0.80	0.52, 1.35	0.47
African-American	1.23	0.62, 2.43	0.55
Hispanic	0.80	0.45, 1.41	0.44
Other ethnic group	0.92	0.47, 1.80	0.80
Married	0.73	0.40, 1.34	0.31
History of any prior conviction	1.96	1.24, 3.10	0.004
Drug Court year 1996-97	0.82	0.50, 1.35	0.44
Drug Court year 1997-98	0.62	0.37, 1.04	0.07
Felony at arraignment	0.64	0.40, 1.02	0.06
Trial track	1.44	0.84, 2.46	0.19
Days in pretrial custody	1.00	0.96, 1.04	0.82
Sanctions	1.09	0.72, 1.64	0.69
Graduated	0.17	0.11, 0.27	<0.0001
Employed when released	0.95	0.62, 1.46	0.82

Reference group is younger age, male, White, not-married, no prior convictions, first year of Drug Court, misdemeanor charge at arraignment, Diversion track, fewer days in pretrial custody, no sanctions and unemployed when released.

the likelihood of rearrest was the same for drug court participants and nonparticipants in this sample, whether or not the subgroups were removed.

The same strategy was applied to the assessment of rearrest rates for drug court graduates and nongraduates so that specific subgroups were systematically removed from the drug court sample and data were reanalyzed. The relationship between graduation, age, and lower likelihood of arrest was robust and was seen across all three subgroup analyses. In addition, a prior history of conviction was consistently noted to increase the likelihood of rearrest in all subgroup analyses. In summary, by demonstrating that main analyses were not affected by biases related to drug court exclusion procedures and/or considerations of decreased effectiveness in the start-up year, these supplementary analyses support the main evaluation findings.

DISCUSSION

This study of a single drug court was designed to compare outcomes between drug court participants and nonparticipants and between graduates and nongraduates as well as to explore predictors of rearrest. Consistent with other literature, the drug court participants were predominantly Caucasian (Brewster, 2001; Schiff & Terry, 1997), male (Tauber, 1995; Vito & Tewksbury, 1998), with a mean age of 31 years (American University Drug Court Clearinghouse and Technical Assistance

Project, 2001; Deschenes et al., 1999; Peters et al., 1999), and single (Brewster; Peters et al.).

In this study, drug court participants were less likely than nonparticipants to have had any prior felony or misdemeanor convictions. This is consistent with some studies that have noted few drug court participants with prior arrests or convictions (e.g., Goldkamp, 1994), whereas other studies found that drug court participants had a higher prior conviction rate than their control groups (Brewster, 2001). This may reflect the variability in eligibility criteria for entering into drug courts throughout the country. In San Mateo County, drug court participants were more likely to be charged with a misdemeanor rather than a felony on their initial arrest, compared to the nonparticipants.

One of the major drug court outcomes described in the literature is rearrest. In this study, rearrest rates were not significantly different for drug court participants and nonparticipants within a two-year follow-up period. However, the rearrest rate for graduates was 19%, compared to 53% for nongraduates, a significant and meaningful difference. Other studies have shown that criminal behavior decreases while clients are in the drug court (Belenko, 1998; Peters et al., 1999) and some have shown that, even after completing the program, rearrest rates are lower for those who completed drug court (Belenko, 2001; Vito & Tewksbury, 1998). However, it is difficult to compare recidivism rates between studies because of the use of different outcomes (arrests vs. convictions), different time frames (while in the program vs. after completing the program), and different comparison groups (e.g., graduates vs. nongraduates, drug court participants vs. diversion).

One unexpected finding from this research was that graduates tended to receive more sanctions than nongraduates. Sanctions were used in order to encourage compliance with drug court requirements. Clients who did not respond to the sanctions would likely be terminated from drug court and have spent less time in drug court. Clients who did respond to sanctions would remain in drug court longer and therefore had more time in which to potentially receive sanctions.

We also examined predictors of rearrest among drug court participants and nonparticipants. Although groups were not comparable, logistic regression was used to control for group differences in age, race, gender, history of prior convictions, severity of initial charge, and drug court participation. Consistent with prior research, offenders were less likely to be rearrested if older (Goldkamp, 1994) and more likely to be rearrested if male (Spohn, Piper, Martin & Frenzel, 2001) or with a history of prior convictions (Goldkamp, 1994; Spohn et al.). Since we had more information for the drug court participants, we included additional variables in the model to predict rearrest for graduates and nongraduates. Also, similar to prior research, graduating from drug court, age, and prior history of convictions were

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significant in predicting rearrest (Peters et al., 1999). Older offenders and graduates were less likely to be rearrested, while those having a history of prior convictions were more likely to be rearrested.

This study was limited due to reliance on administrative datasets, the use of an historical non-drug court comparison group, and differences observed between study groups at baseline. Reliance on administrative datasets restricted the range of control and outcome variables available for analyses and contained different endpoints within each group. While we compared groups on rearrest rates, which were available in the dataset, other outcome measures such as drug and alcohol use, education and employment status, living situation, and family or social relationships could not be assessed. Similarly, the models predicting rearrest differed for participants vs. nonparticipants and graduates vs. nongraduates because a smaller set of variables were available for the non-drug court group. The use of an historical comparison group, comprised of those who would be eligible for drug court before the program started, appears to have resulted in baseline differences between groups. We controlled for observed differences using logistic regression and, in post-hoc analyses, assessed potential biases associated with early dropout or exclusion from drug court and with lower effectiveness of drug court in its first year of operation.

These findings add to the discussion of key issues in drug court evaluations: (1) assessing outcomes for drug court participants; (2) evaluation based on administrative datasets vs. cohort studies; and (3) comparability of control groups. First, it is clear in this study, and in other drug court evaluations, that graduates have better outcomes than nongraduates. Therefore, emphasis on developing strategies to increase retention and graduation could serve as a means to increasing the impacts of drug courts. Second, administrative datasets are a cost-effective way for programs to monitor their progress and their outcomes. However, other evaluation approaches, including longitudinal cohort studies, are needed to assess a broader range of drug court outcome measures. Third, although the creation of comparable control groups for studying drug court outcomes is difficult, the drug court movement may benefit by increased reliance on stronger study designs, including randomized trials. Such studies offer to strengthen the evidentiary basis supporting drug courts by ruling out the competing explanation that outcome differences observed on follow-up are due to group differences present at baseline.

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