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The Douglas County Drug Court: A Comparison of Recidivism Rates Between Drug Court Participants and Traditionally Adjudicated Drug Offenders

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THE DOUGLAS COUNTY DRUG COURT: A COMPARISON OF RECIDIVISM RATES BETWEEN DRUG COURT PARTICIPANTS AND TRADITIONALLY ADJUDICATED DRUG OFFENDERS

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Over the years there have been large increases in the number of drug offenders arrested, prosecuted, and sentenced to prison. These increases have lead to an overload of the criminal justice system. This overload prompted states to develop new responses to substance use and drug-related crime. One such innovation is the drug treatment court, which combines accountability and treatment. The goal of these courts is to reduce recidivism and substance use among drug-involved criminal offenders. This study uses data from Douglas County (Nebraska) to compare recidivism rates for participants in the Douglas County Drug Court and traditionally adjudicated drug offenders. The overall objective was to determine if the Douglas County Drug Court was more effective at reducing recidivism rates as compared to traditionally adjudicated drug offenders. This study found that drug court participants who graduated or were active in the drug court had lower recidivism rates than traditionally adjudicated offenders.

THESIS ACCEPTANCE

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INTRODUCTION

A major concern in the United States today is the high rate of drug use and the criminal behavior associated with such use. One major study to measure this relationship is the Arrestee Drug Abuse Monitoring Program (ADAM). ADAM measures this connection by interviewing new arrestees in a booking facility shortly after arrest. A urine specimen is collected at the same time to determine substance abuse and to verify the self-report responses. According to the 1998 ADAM report between 11 percent and 67 percent tested positive for drugs across 35 sites (ADAM, 1998; 60). Another source of the relationship between drug use and criminal behavior is a survey of state prison inmates. Results of this survey of state prison inmates in 1991 found that 31 percent of inmates committed their offense under the influence of drugs, and 17 percent committed their offense to get money for drugs (BJS, 1991; 22).

Although these data show that there is a linkage between illicit substance abuse and crime. The relationship between legal substance abuse (i.e. alcohol) and crime cannot be neglected. Alcohol is a legal "drug" that has been connected to crime. Based on victim perceptions, about 2.7 million violent crimes occur each year in which victims are certain that the offender had been drinking (BJS, 1998; 3). More than 35 percent of the 5.3 million convicted adult offenders in 1996 had been drinking at the time of the offenses for which they had been convicted (Greenfeld, 1998; 20).

Concerns about the linkages between drug use and crime has historically led policymakers to pursue two somewhat incompatible policies – incapacitation v. substance abuse treatment. The first policy was a direct result of the War on Drugs; which resulted

in legislation that was enacted that included mandatory minimum sentences for drug offenders. This legislation led to an increase of drug offenders in the prison population. In fact, drug-offense sentences are the single most important cause of the trebling of the prison population in the United States since 1980 (Tonry, 1995; 81-82). However, there is no evidence that these crime control efforts (of legislation and imprisonment) lowered the levels of drug use in the United States (Tonry, 1995; 81).

The alternative policy was treatment of the drug offender. Substance abuse treatment is demonstrably effective in reducing both drug addiction and drug-related crime (Drug Court Clearinghouse, 1998; 3). A high percentage of arrestees who are drug users expressed a desire a need for treatment (Sabin, 1998; 55) Thus, treatment may be a reasonable alternative to incarceration of drug offenders.

Drug courts are a way of providing treatment to arrestees who need substance abuse treatment. The drug court was established to facilitate the treatment of substance abusers who have committed a crime and to decrease the recidivism rate of drug offenders. The Douglas County Drug Court's goals are consistent with this. Given this rationale, an important policy question is: whether the Douglas County Drug Court is more effective than traditional adjudication in preventing recidivism? This thesis will answer this question by comparing the recidivism rates of Drug Court participants and traditionally adjudicated felony drug offenders in Douglas County.

DRUG USE AND CRIME

The Relationship Between Drug Use and Crime

The research on substance abuse and crime often focuses on the use of a particular type of drug. The type of drug being studied is often the drug about which the public is most fearful at that particular point in time. Concern about the spread of the drug from the lower class neighborhoods into the middle class neighborhoods creates a "moral panic" and all focus turns to that drug (Reinarman and Levine, 1996; 535). A "moral panic" is a media driven hysteria. The media intends to heighten the fear in persons based on the language used and the exposure to a certain "moral" topic. As heroin swept through many urban areas in the 1960s, so would cocaine in the late 1970s, and then crack cocaine in the 1980s (Mauer, 1999; 51). In the late 1990's and early 2000's much of the focus has been on methamphetamine.

There are a number of studies that document the relationship between substance abuse and crime. In a study about narcotic usage, it was found that for those previously involved in crime, addiction status was associated with an increase in already established predispositions toward deviance rather than an abrupt change in life-style (Nurco et al., 1988; 418). For those not involved in preaddiction crime, addiction status was associated with a much sharper exacerbation of criminal behavior (Nurco et al., 1988; 418). Another study examining the relationship between narcotic use and crime found that during periods of elevated narcotics use, property crime and drug dealing were at their highest levels (Anglin and Speckart, 1988; 214).

In 1998, the ADAM report showed the percentages of offenders with illicit drugs in their systems. That year the average site rate of cocaine use was 36 percent (ADAM, 1998; 1). Multiple drug use often occurs among substance abusers. The ADAM report indicated that 64 percent of offenders who tested positive for opiates also tested positive for cocaine, 30 percent tested positive for marijuana, 15 percent for benzodiazepines, and 13 percent for methadone (ADAM, 1998; 2). Marijuana was shown to be in frequent use among young adults, particularly males (ADAM, 1998; 2).

In a survey of state prison inmates in 1991, the Bureau of Justice Statistics measured the percentages of inmates that used drugs. Consistent with the ADAM data, the survey found that marijuana was used at a high rate. "More than half [of the inmates surveyed] reported using marijuana on a regular basis, and a third had used marijuana in the month before the offense" (BJS, 1991; 21). The survey also found that 14 percent of the inmates surveyed committed their offense under the influence of cocaine or crack (BJS, 1991; 21).

Alcohol is typically excluded from the category of "drugs"(Gandossy et al., 1980; 53). However, it is a primary drug that has been linked with crime. The research findings to date clearly indicate that alcohol increases the probability of violent crime in some individuals (Gandossy et al., 1980; 53). Estimates from the National Crime Victimization Survey indicate that victims of about three million violent crimes each year, or about a quarter of all violent crimes, perceived the offenders to have been drinking (Greenfeld, 1998; 1). More than 36 percent of the 5.3 million convicted adult offenders under the jurisdiction of probation authorities, jails, prisons, or parole agencies

in 1996 had been drinking at the time of the offenses for which they had been convicted (Greenfeld, 1998; 20). Based on this national information, alcohol (like its illegal cousins) is linked to crime.

Theoretical Explanations

There are many different explanations for how substance abuse and crime are connected. There are epiphenomenal explanations of the drug-crime connection. This type of explanation holds that the relationship between drugs and crime is spurious, illusory, and non-causal (Walters, 1998; 9). Thus, some other factor, such as a lack of self-control, influences both substance abuse and crime.

There are also unidirectional explanations for the drug-crime connection. One of these explanations posits that substance abuse causes crime. This explanation suggests that use of drugs may augment the propensity for violent criminality by adversely affecting a person's mood, judgement, and capacity for self-control (Walters, 1998; 11). This explanation also suggests that the high cost of drugs causes moneymaking crimes, which can foster a gradual decline in a person's respect for societal rules (Walters, 1998; 11). Another unidirectional explanation is that crime leads to drug use. According to this interpretation, early antisocial behavior often precedes the use and misuse of alcohol and other substances; it also proposes that continued involvement in crime may retard the natural "maturing out" process that often leads to the cessation of drug use (Walters, 1998; 11-12).

Yet another explanation for the drug-crime connection is the bi-directional explanation. This explanation states that drugs and crime are reciprocally related

(Walters, 1998; 12). Thus, substance abuse causes crime while at the same time crime causes substance abuse.

There are other explanations for the drug-crime nexus. Goldstein (1985) has identified three different connections between drug use and violent behavior, all of which are unidirectional. The three connections are psychopharmacological, economical, and systemic. The psychopharmacological model suggests that some individuals, as a result of short or long term ingestion of specific substances, may become excitable, irrational, and may exhibit violent behavior (Goldstein, 1985; 494).

Goldstein's second model, the economically compulsive model, suggests that some drug users engage in economically oriented violent crime in order to support costly drug use (Goldstein, 1985; 496). The third model is systemic violence, which refers to the traditionally aggressive patterns of interaction within the system of drug distribution and use (Goldstein, 1985; 497). Violence is often associated with the business of drug sales.

Goldstein's models focus on the connections between drugs and violent crime. Goldstein's models do not address the connections between drugs and less serious crimes. By Goldstein's (1985) own admission, the psychopharmacological model is impossible to assess because many instances of substance abuse go unreported and because the psychopharmacological state of the offender is seldom recorded in official records (p. 496). Research on criminal behavior patterns usually shows only an association between the use of a particular type of drug and a criminal offense, for it is extremely difficult to prove that a specific drug compelled certain behavior (Gandossy et al., 1980; 45). The psychopharmacological and behavioral sciences have not established

any drugs (or combination of drugs) as inherently or directly "criminogenic" in the simple sense that they compel users to commit crime (Gropper, 1985; 2). The economic model does not apply to those with the economic means to support their drug habit. Is this model assuming that those with economic means will not commit any drug-related crimes?

Another view of the connection between substance abuse and crime is more general in nature. Gottfredson and Hirschi claim that "crime and drug use are connected because they share features that satisfy the tendencies of criminality. Both provide immediate, easy, and certain short-term pleasure" (1990; 41). Crime and substance abuse, in other words, both lead to a sense of empowerment and immediate satisfaction.

In sum, there is clear evidence that substance abuse and crime are linked. The theories proferred to explain this linkage include unidirectional explanations and bi-directional explanations. It is important to determine the nature of the relationship between drugs and crime in order to develop effective policy responses and to facilitate a treatment program that reduces both substance abuse and recidivism.

CRIMINAL JUSTICE SYSTEM RESPONSE

Policymakers have responded in a variety of ways to concerns about the interrelationships between substance abuse and crime. The typical response was to imprison increasingly large numbers of drug offenders and to imprison them for longer periods of time. Disillusionment with this crime control approach led policy makers to embrace drug treatment, either in conjunction with incarceration or as a condition of

probation. More recently, drug courts have been established to provide both judicial supervision and treatment to drug-involved offenders.

The Crime Control Approach

As noted above, the traditional response to drug-involved offenders was to "lock 'em up and throw away the key." This crime control approach flourished during the so-called "War on Drugs" that was waged during the 1970s, 1980s, and 1990s. The first war on drugs evolved from the Nixon administration's efforts to curb drug usage in the early 1970s (Bullington, 1998; 108). Then in the 1980s and early 1990s the successive administrations of Presidents Reagan and Bush embraced the rhetoric and policies of war, in the process committing vast new resources to fight the war and to ensure that drug offenders would be identified, arrested, and severely punished (Bullington, 1998; 108). Both administrations also used the media to discourage children from using illegal drugs. Nancy Reagan urged children to "Just Say No," while President Bush exhorted them to "Just Don't Do It."

One notable result of the war on drugs was state and federal legislation prescribing harsher sentences for drug offenders. Many states and the federal government increased the penalties for drug use. The federal government passed ever more stringent legislation in 1984, 1986, and 1988: penalties for drug violations were significantly enhanced, even for first-time offenders (Bullington, 1998; 110). They also enacted mandatory minimum sentences for simple possession of controlled substances and for manufacturing, distributing, dispensing, or possession with intent to manufacture, distribute, or dispense controlled substances.

The policies pursued during the war on drugs resulted in dramatic increases in arrests for drug offenses and in the number of drug offenders incarcerated in state and federal prisons. For the nation as a whole, state and local drug arrests increased 105 percent during the 1980-1989 period in response to drug war mandates (Coomber, 1998; 113). Many of these arrests were for simple possession rather than for the serious crimes of manufacturing and delivering. The number of drug offenders in prison increased by 478 percent during the 10 year period from 1985 to 1995, compared to a rise of 119 percent for all offenses (Mauer, 1999; 152). Consistent with this, the odds of being imprisoned for a drug offense increased by 447 percent between 1980 and 1992; the average time served in prison rose from 20 months to 24 months (Mauer, 1999). According to Tonry (1995; 81-82), "Drug-offense sentences are the single most important cause of the trebling of the prison population in the United States since 1980."

Increases in the number of persons arrested for drug offenses also created a caseload problem for the court system. The impact of this drug caseload poses challenges for most criminal justice agencies including police, prosecutors, defense systems, jails, and prisons, exacerbating already difficult problems of correctional overcrowding and court backlogs, and raising public safety concerns about drug-crime violence (Goldkamp, 1994; 11).

Treatment for Drug Offenders

The policies pursued during the war on drugs focused primarily on punishment rather than treatment of drug offenders. As Tonry (1995) and others have noted,

however, there is little, if any, evidence that increasing penalties has a deterrent effect on crime. In fact, incarceration for drug crimes has often been termed a "revolving door." Drug offenders are often sentenced to prison and then released and arrested again. This could be due to offenders not receiving appropriate substance abuse treatment when incarcerated. The addiction is not dealt with through treatment, so the offender returns to the drug habit and the drug-related crimes upon release from prison.

There is a documented need for treatment of drug offenders. Using ADAM data, Sabin found that a high percentage of arrestees were drug users and that a high percentage of arrested users expressed a desire or need for drug treatment (1998; 55). Other research using ADAM data and a newly constructed module designed to assess dependence found that over half of the arrestees reported symptoms of alcohol dependence and 34 percent reported symptoms of drug dependence (Baumer, 1998; 179).

There is compelling evidence that treatment, in contrast to imprisonment, "works." Lipton, for example, concludes that "addiction treatment is a critical component of the nation's war on drugs, and the incarceration of persons found guilty of various crimes who are also chronic substance abusers presents a propitious opportunity for treatment" (1998; 39). All the treatment programs reviewed by Lipton showed positive effects. The treatment was shown to decrease the reincarceration rate of the drug offenders. Evidence from numerous sources over two decades demonstrates that drug-treatment programs can reduce both substance use and criminality among their clients (Anglin and Hser, 1990; 432).

A possible treatment response of substance abuse is "harm reduction." Harm reduction is a public health approach aimed at reducing the harmful consequences of substance use for both the user and the community (Tucker, 1999; 13). The harm reduction approach recognizes that complete abstinence for some substance abusers is not possible. This policy simply tries to lessen the harm caused by that abuser. The United States' current policy is zero tolerance, with the understanding that zero use will generate zero harm. However, with no reduction in substance abuse there is no reduction in harm. It has been proven by current statistics that substance use has not been eliminated by this zero tolerance policy.

Harm reduction programs include such things as needle exchanges. These exchanges allow intravenous drug users to exchange used needles for clean needles. This is meant to reduce the chance of the user obtaining HIV by sharing needles. Evidence indicates that clean needle exchanges reduce the spread of HIV (Tucker, 1999; 13). Another example of a harm reduction program is methadone maintenance. This is used to allow heroin addicts to reduce their heroin intake and avoid going through withdrawal.

Harm reduction can also be considered when a "hard" drug user (using crack/cocaine and heroin) switches to a lesser drug (marijuana or alcohol). This is a reduction in the harm caused by the type of drug used. The harm reduction approach does not see each drug as equal. There is some differentiation between levels of harms caused by different kinds of drugs, for example, soft drugs (alcohol, cannabis, etc.) and hard drugs (cocaine, heroin, etc.) (Tsui, 1998; 246).

The history of substance abuse treatment has been varied. The first approach was based on the belief that substance abuse was a moral failing and that those persons with substance abuse problems were morally unfit. The form of treatment prescribed was primarily based on religion. The church was seen as a way to deal with the substance abuser. The second approach was based on a legalistic point of view. Substance abuse was seen as a crime and the treatment applied was typically incarceration. A third approach viewed substance abuse as a psychological weakness. The treatment prescribed for substance abusers was, thus, psycho-therapy. The last approach is the medical model of substance abuse. Under this model, substance abuse is seen as a disease. It is believed that there is a genetic link to substance abuse and that one can trigger the disease by ingesting a certain amount of the substance.

The history of treatment in correctional supervision is relatively short. Correctional treatment began in 1935, when the government opened a hospital in Lexington, Kentucky for incarcerated addicts under the 1929 Porter Narcotic Farm Act (BJS, 1992; 81). These types of hospitals did provide treatment to those with addictions but the facilities still resembled prisons (BJS, 1992; 81). This remained the correctional mode of treatment for many years.

There have been five modes of treatment in correctional facilities. These modes are: 1) no specialized services, which is most typical, 2) drug education and/or drug abuse counseling, 3) residential units dedicated to drug abuse treatment, 4) client-initiated and/or maintained services (self-help groups), and 5) specialized services for drug abusers not directly targeted at their drug abuse problems (Lipton, 1998; 12).

Research done on residential units dedicated to drug abuse treatment in prisons shows that this mode of treatment works to decrease substance abuse. Lipton found similar results in three different prison therapeutic communities. The Amity Prison therapeutic community is found in the R.J. Donovan Correctional Facility in California (Lipton, 1998; 16). Lipton found that in the twelve months that the treatment subjects and program drop-outs were at risk, 26 percent of the participants who went through both the program and the community-based therapeutic community were reincarcerated within one year and 43 percent of the program completers were reincarcerated (1998; 19). Both of these percentages were lower than those of the control group and those who dropped out of the program.

Lipton also looked at a prison drug treatment program in Texas. The preliminary data from the one-year follow-up of the first 1000 inmates referred to the in-prison treatment units showed that only 7.2 percent of those who completed three or more months of treatment had been reincarcerated, as compared to 18.5 percent for similar offenders who had received no treatment (Lipton, 1998; 23). However, these results may be skewed, as the researchers did not examine recidivism data for those who dropped out of the program. There were high drop out rates for this treatment program.

Most of the research about prison treatment programs focuses on programs in male prisons. However, Lipton found similar results for the female groups (1998; 27). The female therapeutic community group had a significantly lower arrest rate than the female counseling and female no treatment groups combined (Lipton, 1998; 27). The female groups also had a lower rearrest rate than the male groups.

Treatment in the jail setting differs greatly from treatment offered in the prisons. Jail terms are typically under a year, thus long term treatment is not possible. The percentage of jail inmates who receive comprehensive drug treatment while incarcerated is quite low (Swartz et al., 1996; 553). Swartz evaluated a jail-based treatment program called IMPACT, which stands for Integrated Multiphase Program of Assessment and Comprehensive Treatment. The overall recidivism rate was 51 percent; that is approximately one-half of the IMPACT clients were rearrested during the follow-up period (Swartz et al., 1996; 564). However, the rate of rearrest decreased with increasing lengths of stay in IMPACT, up to about 150 days of treatment (Swartz et al., 1996; 564). This follows the same pattern of the prison and community treatment services. That is, the longer the offender is in treatment, the less likely he/she is to recidivate.

A third area of correctional supervision of treatment is in diversion programs. The research on diversion programs reveals varying outcomes. One finding is that offenders who completed treatment alternative programs were less likely to recidivate than offenders who did not (Van Stelle et al., 1994;194). Rearrest was the recidivism measure in this particular study. This finding conflicts with a finding of another diversion treatment program. Hepburn and Albonetti found no significant effect of treatment on the outcome measures of petition to revoke probation and revocation of probation (1994; 175). The researchers claim that this finding could be a result of ineffective or poorly administered treatment. Another evaluation of a diversion treatment program found that levels of compliance in the treatment had an effect. Benedict et al. (1998; 181-182) found that the level of compliance with drug treatment had a significant effect on

recidivism among white men, but the lower the rate of compliance with drug treatment among African-American or Hispanic probationers, the higher the rate of rearrest.

The treatment offered in the criminal justice system is, often, "coerced." That is, the offender has the "option" to attend treatment but sanctions for not attending occur. Thus, the treatment is involuntary rather than voluntary. Research on "coerced" treatment is varied. The problems with the research are the many definitions of "coerced." The frequently used definition is that "coercion occurs when an alcoholic or drug abuser is given the choice between an opportunity to comply with addiction treatment or to receive alternative consequences" being prison, jail, probation, loss of a child, loss of employment, etc. (DATA, 2000; 1). One study on "coercion" and treatment found that coercion facilitated success under certain circumstances (Farabee et al., 1998; 9). Another study found that clients who completed substance abuse treatment were more likely to have been admitted on an involuntary basis (Farabee et al., 1998; 9).

A major factor in determining if substance abuse treatment is effective at reducing drug usage is matching the client to the correct type of treatment. An evaluation was done that compared three different types of drug offenders and the treatment that was offered to them while under supervision (Falkin et al., 1999). Based on an assessment, the offenders were divided into those who needed residential treatment, outpatient treatment, or only urine monitoring. Those under supervision were assigned to outpatient treatment even if their need was for a greater or lesser treatment. Outpatient drug treatment was most effective for those clients who were appropriately matched to this treatment modality on the basis of the severity of their drug use (Falkin et al., 1999; 7).

"The outpatient treatment did not lower rearrest rates among probationers whose drug use indicated a need for more structured and intensive treatment" (Falkin et al., 1999; 7).

Drug courts are a melding of the above treatment modalities. The drug court offers a joint judicial and correctional treatment program. Drug courts are offered for an extended period of time. Many courts have at least a 12-month program, with others extending as long as 24-months. However, each program is individualized for the participant and it may take longer for different individuals to move through the phases. Thus, the length of time that an individual participates in drug court varies. This allows the participant to be engaged in treatment for a prolonged period. Drug courts are a form of "coerced" treatment. If the participant does not attend treatment, he/she often faces some type of sanction. Drug courts also match participants to treatment by using a variety of assessment tests. These tests help in determining which level of treatment a participant needs.

Effective Treatment and the Douglas County Drug Court

From the research above one can conclude that treatment does help in reducing the recidivism of drug offenders. Anglin and Hser (1990) give some guidance as to the components of an effective treatment program. They discuss a four-pronged program and state that this program is of importance in developing and implementing treatment for drug abuse (Anglin and Hser, 1990; 442). The first requirement is that the period of intervention must be lengthy since drug dependence is typically a chronically relapsing condition (Anglin and Hser, 1990; 442). The Douglas County Drug Court does have this aspect. Participation in the Drug Court can last anywhere from 12 months to as much

time as it takes to meet the requirements of graduation. One of the requirements of graduation is the successful completion of all mandated treatment.

Second, programs must initially provide a significant level of structure (Anglin and Hser, 1990; 442). This structure is seen in the Douglas County Drug Court. Participants must come before the Judge as well as maintain treatment appointments and submit to random urinalysis. Participants in the Douglas County Drug Court must meet with the drug court counselor a minimum of once a week (Barnes, 2000). The participants must also meet with their treatment providers at least three times a week (Barnes, 2000). Often, they are also required to attend AA/NA meetings two to three times a week (Barnes, 2000).

Third, effective programs are flexible; no absolute mandates should determine client management (Anglin and Hser, 1990; 443). The Douglas County Drug Court is flexible. Often, if a certain type of treatment isn't working for the participant in Drug Court, an alternative treatment is found.

Finally, any intervention program must undergo regular evaluation to determine its level of effectiveness and to determine whether changing characteristics of clients require compensatory changes in the program (Anglin and Hser, 1990; 443). The Douglas County Drug Court has been evaluated. The evaluation was conducted by the Institute for Social and Economic Development (ISED) and the University of Nebraska at Omaha. This study found that drug court participants were significantly less likely to be arrested for a new criminal offense than traditionally adjudicated offenders in a 12-month follow-up period.

THE DRUG COURT MOVEMENT

The drug treatment court movement began in Dade County, Florida in 1989. In response to extraordinary growth in the drug-related criminal caseload and the perceived impact of illicit drugs on public safety, Florida's Eleventh Judicial Circuit implemented a court-based drug abuse treatment approach (Goldkamp, 1994; 112). The Dade County Drug Court brought together drug treatment and criminal justice goals and shifted the philosophy from retribution to rehabilitation. Dade County's drug court has been used as a model for other drug courts across the country.

Since 1989, the number of drug courts in the United States has increased dramatically. According to the OJP Drug Court Clearinghouse and Technical Assistance Project, there were 396 operating drug courts in 1999, with 291 more being planned. These drug courts are spread throughout all 50 states. The 396 operating drug courts have had approximately 145,000 individuals enroll with approximately 99,500 individuals graduating (OJP, 1999; 1). Recently New York State passed legislation to require that nearly all nonviolent criminals who are drug addicts be offered treatment instead of jail time (Omaha World Herald, 2000; 8). Many jurisdictions also have implemented or are planning drug treatment courts for juvenile offenders.

There are two different types of drug courts: those that (1) expedite the processing of drug cases and (2) use court-monitored drug treatment to attempt to achieve changes in defendants' drug-using behavior (GAO, 1995; 8). The drug courts that expedite the processing of drug cases do not offer treatment. Instead, this type of drug court is

established simply to speed the case processing of drug cases. "Due to the need to manage a large number of cases that vary considerably in the severity of potential applicable sanctions the first type of drug court was established" (Cooper, 1994; 1). The drug court is set up to help lighten the load of the general court system. Some of these are night drug courts, in which court proceedings take place during the night hours. Courts that have established expedited drug courts have been able to improve their capacity to control the caseload (Cooper, 1994; 3). Some of the improvements are: increased court efficiency;, increased productivity of judges, prosecutors, indigent defense counsel, and their staffs; reduction in the number of defendants who fail to appear and in the number of bench warrants that must be issued; reduction in pretrial jail days used for detained defendants; reduction in costs for pretrial detention, and more effective treatment services for offenders (Cooper, 1994; 3).

The second type of drug court is the treatment oriented drug court, which was established to provide judicial supervision and treatment to substance-abusing offenders. This is the type of court that best fits the accepted definition of a "drug court." According to the National Association of Drug Court Professionals, a drug court

> is a special court given the responsibility to handle cases involving less serious drug using offenders through a supervision and treatment program. These programs include frequent drug testing, judicial and probation supervision, drug counseling treatment, educational opportunities, and the use of sanctions and incentives (GAO, 1995; 9).

The treatment-oriented drug court consists of two primary components: supervision and treatment. Supervision is provided by the team of criminal justice officials in the courtroom (Goldkamp, 1994; 113). The judge takes on the primary role;

he/she plays the dual roles of promoter and of disciplinarian. The judge uses incentives, such as a reduction in the number of appearances before the drug court, to reward improvement and sanctions, such as a weekend in jail, to discourage continued drug use and noncompliance with ordered treatment. Most drug court teams also consist of public defenders, prosecutors, and treatment services representatives. The public defender and the prosecutor provide legal advice to the drug court participants. The treatment services representative determines the level and type of treatment that is needed and monitors the participant's progress in treatment. This team comes together to discuss each participant's progress and to determine whether any incentives or sanctions are appropriate.

The second component of the treatment-oriented drug court is some type of drug abuse treatment. The treatment used in drug court is handed out on an individual basis. Participants in the drug court program go through a series of assessment tests that treatment providers use to determine the type of treatment best suited for that participant. Thus, the range of treatment varies greatly. Drug court participants may be court-ordered to attend residential treatment, outpatient treatment, relapse prevention, etc.

The basic goals of all drug treatment courts are to reduce substance abuse and reduce recidivism rates of drug offenders. The philosophy on which the drug court is based is an integration of accountability by and treatment of the participant. The drug court holds participants accountable by having them admit their addiction and (depending on whether the court is pre-adjudication or post-adjudication) admit their guilt in committing a crime. The court then proceeds to offer participants treatment for their

addiction. This philosophy differs from that of the traditional court. The traditional court's philosophy is to hold the offender accountable for his/her criminal action after the determination of guilt.

Evaluation of Drug Courts

Research on drug courts varies greatly, which makes it difficult to compare the results. The research varies due to the fact that each drug court is set up differently in order to meet the needs of the jurisdiction in which it is operating. The drug courts can vary on the type of participants accepted into the court. For example, drug courts responding to a GAO survey reported targeting adults, juveniles, nonviolent and violent offenders, offenders with and without a substance addiction, first-time and repeat offenders, and probation violators (GAO, 1997; 53). Drug courts also differ in the types of crimes that define eligibility for the program. Some courts take misdemeanors only, whereas others take misdemeanors and felonies. As noted earlier, some drug courts are pre-adjudication, while others are post-adjudication. However, despite these differences, most drug courts have similar goals and all share the same philosophy.

The research on the effectiveness of drug courts is relatively new. Most research consists of evaluations of a certain drug court. The GAO, in a 1997 overview of drug courts, stated that drug courts were too new to be able to assess their overall impact/effectiveness (GAO, 1997; 69). The GAO looked at a number of evaluations of drug courts. However, the GAO came to the conclusion that the evaluations could not be compared. These studies varied in objectives, scope, and methodologies. Many of the evaluations showed some positive results but could not definitively establish whether

drug courts were successful in reducing recidivism or relapse into substance abuse. Four of the studies that had comparison groups found that rearrest rates for program participants or graduates were lower than those for the comparison groups of non-participants (GAO, 1997; 83). However, two found either no difference or small and insignificant differences (GAO, 1997; 83).

The Drug Courts Program Office looked at multiple drug courts in operation across the United States. They found that "recidivism rates continue to be reduced for graduates" (OJP, 1998; 11). "Recidivism among all drug court participants has ranged between 5 and 28 percent and less than 4 percent for graduates" (OJP, 1998; 4). However, this report does not contain the recidivism measures used.

A number of studies have found that drug court graduates and participants have significantly lower recidivism rates than offenders in comparison groups (Belenko, 1998; Drug Court Clearinghouse, 1998; Goldkamp, 1994; Peters and Murrin, 2000). One study, for example, examined two drug courts and found that for both of the drug court programs, graduates had fewer arrests than non-graduates during the 30 month follow-up period for felony offenses, violent offenses, property offenses, and probation and parole offenses (Peters and Murrin, 2000; 6). This study examined all participants admitted to both of the drug courts. The drug court groups were compared to drug offenders placed on probation and released into the community. Arrest was the primary measure of recidivism.

One detailed study conducted by Goldkamp (1994) of the Florida Dade County Drug Court found similar results. Goldkamp compared the arrest rates of drug court

participants and other types of felony offenders during a 12-month follow-up period. Drug court defendants generated somewhat lower rates of reoffending than 1990 non-drug felony defendants and notably lower rates of reoffending than 1990 other felony 2 and felony 3 drug defendants (Goldkamp, 1994; 126). Goldkamp also collected failure to appear in court data for each defendant. He found that drug court defendants were more likely to fail to appear for court appearances than traditional felony defendants (1994; 128). He attributed this to the increased frequency with which drug court defendants were required to appear in court.

Belenko (1998) reviewed several evaluations of drug courts around the nation in 1998. The results of most of the studies were consistent, with decreased recidivism rates for drug court participants. Some of the evaluations also found that post-program drug use was lower for drug court participants than for offenders in comparison groups (Belenko, 1998; 14). Post-program drug use could be considered as a recidivism measure. Drug use must decrease in order for drug related crimes to decrease. Belenko also critiqued the evaluations. He found that there has been insufficient research on drug court treatment services and, thus, that it was difficult to identify the specific factors that affect treatment outcomes (Belenko, 1998; 19).

An evaluation of the Multonmah County drug court diversion program found that there was a decrease in recidivism rates among participants (Finigan, 1998; 7). The samples consisted of drug court participants, who were divided into two groups - those who graduated and those who did not complete the program, and traditionally adjudicated offenders who were eligible for the program but did not receive it. The measure of

recidivism was arrest. Finigan found that "program graduates were re-arrested at a rate of 36 new arrests per every 100 participants in the two year period after leaving the program" (1998; 7). Participants who did not complete the program recidivated at a greater rate than the graduates. The traditionally adjudicated "were re-arrested at a rate of 153 per 100 participants in the two year period" (Finigan, 1998; 8). Thus, the drug diversion court did reduce recidivism in participants.

The National Institute of Justice published an evaluation of the D.C. Superior Drug Court. All drug felony defendants were randomly assigned to one of three different courts. The first was the standard docket, which handled cases in the normal fashion. The second was the treatment docket, which intervened with a treatment program. The last was a sanctions docket, which had sanctions for failure and encouraged treatment. The study found that "sanctions program participants were significantly less likely than the standard docket sample to be arrested in the year following sentencing" (NIJ, 2000; 9). Offenders assigned to the treatment docket were not less likely to be arrested than the standard docket in the year following sentencing (NIJ, 2000; 9). This study shows that the melding of sanctions and treatment leads to a decrease in recidivism rates.

In contrast to these studies, which revealed positive results, some studies conclude that drug courts do not reduce recidivism. Granfield et al. (1998) conducted an evaluation of the Denver drug court. The researchers had a random sample of 100 drug court defendants and two control groups of 100 randomly selected defendants from the pre-drug court years. The primary measure of recidivism was rearrest in a 12 month follow-up period. The data on rearrests revealed that drug court offenders did not

reoffend at a lower rate than offenders in previous courts (Granfield et al., 1998; 195). "There was no significant difference across each court with respect to the number of rearrests, nor was there any significant difference in the proportion of offenders who were rearrested" (Granfield et al., 1998; 196).

There are limitations to the research that has been conducted on drug courts. Some of the research does not separate the "failure to appear" arrests from the other types of arrests. It is important to try to determine if these types of arrests are different from an actual arrest for a new crime and if there is a difference in numbers of failure to appear arrests between comparison groups. This allows the researcher to analyze an arrest for a new crime rather than an arrest for "failure to appear". Another limitation is that most research does not keep those participants who dropped out or were removed from the drug court program in the research sample. It is important to determine if these "failures" have higher recidivism rates or if the time spent in the program had some sort of effect.

Other research also fails to determine the predictors of positive urinalyses for drug usage. As stated above, the goals of drug court are to reduce drug use and reduce recidivism rates. In order to decrease drug-related recidivism, drug usage must decrease as well. Thus, it is important to examine indicators of continued drug use. Finally, there are generalization problems with the research on drug courts. Each drug court may be based around the same philosophy but each is set up to reflect the needs of the jurisdiction in which the drug court is located. Thus, the results of the evaluation may not be generalized to other drug courts.

THE DOUGLAS COUNTY DRUG COURT

The focus of this study is the Douglas County Drug Court in Nebraska. The Douglas County Drug Court falls within the definition of a drug court by the National Association of Drug Court Professionals. It does so because this drug court is treatment oriented. Its goals all revolve around treatment of drug users in order to reduce recidivism. The goals of the Douglas County Drug Court are as follows: 1) divert 225-250 non-violent felony offenders to community-based substance abuse treatment and supportive services in lieu of prosecution with close judicial supervision; 2) reduce reliance on incarceration for non-violent offenders; 3) reduce recidivism rates for participants; 4) reduce alcohol and drug use for participants; 5) increase employment, education, and social functioning of participants; and 6) make available a wide range of intermediate sanctions for the prosecutor and courts in lieu of incarceration (Douglas County Drug Court, 1999; 4).

Douglas County Drug Court is a pre-adjudication drug court. Prior to March of 1998, there were two tracks of the drug court: a diversion track and a probation track. The charges that brought the participant to Diversion Track Drug Court are set aside and all speedy trial rights are waived. In the Probation Track Drug Court, the incarceration for violation of probation is set aside. The Probation Track was discontinued in March of 1998. However, these participants are included in the sample for this study. Once the participant completes the program, there is a dismissal of pending criminal charges. If the participant drops out or is removed from the program, the charges are reinstated.

In order for an individual to participate in the Douglas County Drug Court, he/she must meet a number of eligibility criteria. These criteria differ for the diversion track and the probation track. The eligibility requirements for the Diversion Track of Drug Court are: 1) no more than one prior non-violent felony conviction (but multiple misdemeanor convictions may be considered); 2) arrested for drug possession or minor drug delivery offenses; 3) Level of Service Inventory (LSI) Risk/Need level-medium/high; 4) prior substance abuse treatment experience; and 5) prior prosecutor diversion program participation.The eligibility requirements for the Probation Track of Drug Court are: 1) may have two prior non-violent felony convictions, 2) probation track at sole discretion of COSAT Judge and District Judge assigned case, 3) case Judge must approve application and sentence defendant to Drug Court, 4) may have multiple misdemeanor convictions, and 5) demonstrated substance abuse treatment need.

If accepted to drug court, the participant agrees to come to drug court once a week until that is changed to a lesser frequency by the drug court team. The participant also must partake in treatment and random urinalyses. When the requirements are met, the participant takes part in a graduation ceremony.

Certain requirements must be met in order for the participant to graduate from drug court and have the pending criminal charges dismissed. The requirements are: 1) satisfactory completion of substance abuse treatment verified to Diversion Services and treatment fees paid; 2) satisfactory attendance at Diversion Services and completion of any assigned aftercare or support groups; 3) full-time continuous employment for at least six months prior to graduation unless waived; 4) full payment of $460 program fee to

Diversion Services; 5) no felony or serious misdemeanor convictions while participating in Drug Court and no charges pending or outstanding warrants; 6) no positive, diluted or missed drug tests for six months; 7) completion of any other program conditions required by Diversion Services or the Drug Court judge; 8) payment of any court costs due to District Court; and 9) complete a comprehensive reassessment interview after 12 months participation. Diversion Services is a non-profit organization that provides treatment and monitors the participants accepted by the drug court. Upon graduation, the drug court provides for dismissal of pending criminal charges.

As mentioned above, one of the goals of the Douglas County Drug Court is to reduce drug and/or alcohol use for participants. This implies the use of drug treatment. In fact, a variety of drug abuse treatments are used based on the participants' assessment recommendations. Comprehensive substance abuse assessments are given to each drug court participant shortly after being accepted to the program. The results are sent to the Behavioral Health Clinical Coordinator who, after an interview with the participant, determines the level of treatment. As can be seen in Table 1, the treatment available to the Douglas County drug court participant is varied.

(Insert TABLE 1 about here)

Treatment is also offered for specific areas other than substance abuse. The court offers treatment for anger management, sexual abuse, physical abuse, domestic violence, gambling, child neglect, etc. (Barnes, 2000). "In order for the participant to have long term sobriety, the other [treatment] issues must be dealt with" (Barnes, 2000).

Termination of clients does occur, often for a variety of reasons. Termination can occur when a participant repeatedly fails to meet the requirements and the recommendations of the drug court. Termination also may occur when the participant commits a new crime. The Douglas County Drug Court has a policy that allows termination to follow due process. The participant is notified that a termination hearing will take place. The participant then agrees to follow a set of requirements designed to show the court that he/she is willing to adhere to the terms of drug court and stay a participant. The participant must 1) attend the termination hearing, 2) contact their drug court counselor and indicate his/her desire to stay in the program, 3) ask the counselor what he/she needs to do to stay in the program, 4) contact his/her attorney, and 5) contact the treatment coordinator and ask to assist him/her with treatment suggestions (Douglas County Drug Court, no date).

The Douglas County Drug Court does include the four components that Anglin and Hser (1990) contend are important to provide substantial treatment for drug offenders. It also integrates "coerced" and lengthy treatment, both of which have been found to be effective in reducing substance use and drug-related crimes. The Drug court also attempts to correctly match participants to treatment by using a variety of assessments. By providing this substantial treatment will the Douglas County Drug Court be more effective at reducing recidivism as compared to traditionally adjudicated felony offenders? That is the question that this study attempts to answer.

RESEARCH DESIGN AND METHODOLOGY

The goal of this study is to determine whether participation in the Douglas County Drug Court reduces substance abuse and criminal behavior. We compare participants in the Douglas County Drug Court to felony drug offenders in a matched comparison group on several indicators of recidivism.

Study Samples and Data Collection

There are two groups of offenders included in this study. The first sample consists of Douglas County Drug Court participants from 1997 to 1998 (N=317). The comparison group includes offenders who were arrested for felony drug offenses between January 1997 and March of 1998 and who subsequently had charges filed in Douglas County District Court (N=309). Offenders in the comparison group-the traditionally adjudicated felony offenders-were matched as closely as possible to those in the drug court group on gender, race, age, and type of offense. Because the data file provided for the traditionally adjudicated offenders did not include information on the offender's prior record, we were not able to match on this characteristic. Table 3 shows that these two samples are very similar.

(Insert TABLE 3 about here)

The data for this study were originally collected by the Institute for Social and Economic Development (ISED) and the University of Nebraska at Omaha for a joint on-going evaluation of the Douglas County Drug Court. The data were collected in two different stages. Phase one of the data collection included information on the offenders' background characteristics (i.e., gender, race/ethnicity, and age) and prior criminal

record, as well as information on several different indicators of recidivism. The recidivism measure primarily used in this first phase of data collection was a new arrest during a 12-month follow-up period; this measure, however, did not distinguish between a new arrest that resulted from the offender's failure to appear in court and an arrest for a new crime. This first phase of data collection was then used to do a preliminary evaluation of the Douglas County drug court.

Information added in phase two of the data collection process included more detailed information on the offender characteristics for the drug court participants. This information included marital status, employment, and number of dependents. The research team also added data on the results of urinalysis tests, including the drug for which the offender tested positive. Treatment outcomes at the initial contact and treatment at the cut off time of December 1999 were collected; information regarding the participant's status in the program (i.e. graduated, active, dropped out, or removed) also was added. For the traditionally adjudicated offenders and the drug court participants, we added data on the nature of all arrests during the follow-up periods of 12 and 24 months; this allowed us to differentiate between arrests for failure to appear in court and arrests for new crimes.

Dependent and Independent Variables

Recidivism, which is the dependent variable, is measured in a variety of ways (see TABLE 3). The measure most commonly used in the previous research, as stated above, is a new arrest for a misdemeanor or felony (excluding failure to appear arrests). Arrest will be the primary recidivism measure for this study. There are two different follow up

periods, one at 12 months and one at 24 months. Arrest will be coded as one for a new arrest and zero for no new arrest for each of the follow-up periods. New arrests for failure to appear in court are not included in this measure. We also will measure recidivism as a new arrest for a felony (1=yes; 0=no), and the number of months until the first new arrest for a misdemeanor or felony.

Another indicator of recidivism is whether the offender is arrested for failure to appear in court during the follow-up period. A failure to appear is defined as a neglection on the part of the defendant to show for a court hearing. As noted above, failure to appear arrests seem to be found at a high frequency among participants in drug courts. This could be primarily due to drug court participants having to appear in front of a judge multiple times. In Douglas County there are times when the participant has to report in front of the judge once a week. As the participant gets closer to graduation and starts meeting requirements, the participant may only have to see the judge twice a month. As the participant makes further steps toward graduation from the program, he/she may only have to see the judge once a month.

A final measure of recidivism for drug court participants only is a positive urinalysis (UA). The intent (and assumption) is that random drug testing will serve both as a surveillance mechanism that deters drug use and as an early warning device to signal an increased risk of failure to appear and/or criminal activity (Hepburn and Albonetti, 1994; 160). Having a dirty UA could be a sign of recidivism given that the client is in treatment for drug use and is participating in an illegal activity by taking drugs. A urinalysis is considered dirty if the presence of any illegal drug or alcohol is found in the

urine. This is used both as a measure of recidivism and to determine the predictors of a positive urinalysis. To determine the predictors of a positive urinalysis, four different variables of urinalysis were examined: total number of positive UA's, total number of positives in first six months of participation, total number of positives after six months of participation, and a dichotomous variable of positive after six months of participation.[1] Table 3 shows the coding for all the dependent variables.

(Insert Table 3 about here)

The control variables are gender, race/ethnicity, and prior record. Gender is coded as a dummy variable, with males coded as 1 and females coded as 0. Race/ethnicity is coded as dummy variables for white (coded as 1 if white and 0 if not), African-American (coded as 1 if African-American and 0 if not), and Hispanic (coded as 1 if Hispanic and 0 if not). Prior record is measured as the total number of arrests for misdemeanors or felonies in the twelve months prior to the offense. The final control variable is whether the offender was in drug court (coded as 1) or not (traditionally adjudicated coded as 0).

Statistical Analysis

With the exception of the number of months until first new arrest and total numbers of urinalysis, all of the dependent variables are dichotomous indicators of recidivism. Logistic regression, which is an estimation technique for equations with dummy variables that avoids the unboundedness problem of the linear probability model, is used to analyze these variables (Studenmund, 1992; 518). Ordinary least squares regression is used to analyze the four variables of total numbers of positive urinalysis.

Survival analysis is used to analyze the number of months until the first new arrest. "The survival time model yields predictions of the number of individuals who will fail (become recidivists) at any length of time after release" (Chung et al., 1991; 60). One can also use the model to estimate the effect of a program on time until recidivism, holding constant the other observable characteristics of the individuals. "The model is effectively used to control for relevant differences between the treated and untreated groups" (Chung et al., 1991; 60).

The goal of this study is to compare the recidivism rates of drug court participants to those of the matched group of felony drug offenders. A variable indicating whether the offender was a drug court participant (coded 1) or a traditionally adjudicated felony drug offender (coded 0) is included in all of the multivariate analyses. If participation in the drug court reduces recidivism, there will be a statistically significant negative association between the type of offender (drug court vs. traditionally adjudicated) and the various indicators of recidivism.

The drug court sample includes those who graduated, were active in drug court, dropped out, and were removed from drug court (see Table 4). There is a need to separate those drug court participants who have graduated or are active in the drug court from those who have dropped out or have been removed to determine if there is a difference between the groups. Drug court participants who have graduated or are active were coded as 1, all other offenders (traditionally adjudicated and drug court participant dropped out or removed) were coded as 0. The second dummy variable for those who did not graduate was coded 1 for all those drug court participants who dropped out or

were removed and 0 for all other offenders (traditionally adjudicated and active drug court participant or graduate).

(Insert Table 4 about here)

RESULTS

Analysis on the Effect of Drug Court

The bivariate recidivism results are presented in Table 5. This table shows the differences between the drug court participants and the traditionally adjudicated offenders on recidivism measures. On six of the measures of recidivism, the drug court participants had lower rates than traditionally adjudicated offenders. It is, therefore, important to determine if these differences are significant using multivariate analysis.

(Insert Table 5 about here)

A logistic regression was conducted using arrest for a felony or misdemeanor in the last 12 months as the dependent variable. Prior arrest, age, and black were significant at the 0.05 alpha level. These results imply that offenders who have a large number of prior arrests, who are young, and who are black are more likely to recidivate. However, there was no significant difference between drug court participants and traditionally adjudicated offenders in the 12 month follow-up period. The results of this logistic regression are presented in Table 6A. Table 6B contains the predicted probabilities of recidivism for offenders in the two groups. The probabilities for these variables were calculated by using the formula:

$$P_I = \exp(Z_I)/1 + \exp(Z_I) \text{ where } Z_I = \sum_k B_k X_{ik}$$

(Insert Tables 6A and B about here)

The predicted probabilities were calculated for white males due to the fact that white males compromised a larger part of both samples. The predicted probability of a new arrest for a felony or misdemeanor within 12 months was 0.35 for drug court participants and 0.43 for traditionally adjudicated offenders.

The results of the analysis of the likelihood of arrest for a misdemeanor or felony within 24 months are presented in Table 7A. Prior arrest, age, sex, and black were statistically significant at the 0.05 level. These results can be interpreted, as those offenders who have multiple prior arrests in 12 months, and are young, black, or male were more likely to recidivate. Again, there was no statistically significant difference between the drug court participants and the traditionally adjudicated offenders in the 24 month follow-up. This is confirmed by the predicted probabilities of recidivism, which are shown in Table 7B.

(Insert Tables 7A and B about here)

The results of the analysis discussed thus far focus on recidivism measured as whether the offender was arrested or not in the two follow-up periods. Another way to look at recidivism is to consider the time to failure, or the number of months until a new arrest for a misdemeanor or felony in the two follow-up periods of 12 and 24 months. "Measuring the timing of recidivism allows the researcher to examine desistance from criminal behavior (as indicated by survival to the end of the follow-up period without a new arrest) and to explore differences between immediate and delayed return to criminal behavior" (Spohn et al., 2000; 17).

A survival analysis examining the timing of a new arrest in the 12 month follow-up period was significant at the 0.05 level. As shown in Table 8, offenders who were younger, black, and had a large number of prior arrests failed more quickly. There was no statistically significant difference in time to failure between the drug court sample and the traditionally adjudicated sample. This is confirmed by the data displayed in Figure 1, which illustrates that the survival curves for drug court participants and traditionally adjudicated offenders were very similar.

(Insert Table 8 and Figure 1 about here)

A second survival analysis examined the timing of a new arrest in the 24 month follow-up period. This model was significant at the 0.05 level. Age, sex, black, and prior arrest were significant at the 0.05 level. Those offenders who were young, black, male and had a large number of prior arrests failed more quickly. Again, there was no significant difference in time to failure between the drug court sample and the traditionally adjudicated sample. The results of this survival analysis can be seen in Table 9.

(Insert Table 9 about here)

The survival plot of time to new arrest in the 24 month follow-up is presented in Figure 2. By looking at the survival plot in Figure 2, one can see that the lines representing the drug court sample and traditionally adjudicated sample almost merge together. This indicates that these two groups failed at a similar rate.

(Insert Figure 2 about here)

These results, at first glance, would lead one to believe that there are no significant difference in recidivism rates between the drug court participants and the traditionally adjudicated offenders. However, the drug court sample consists of those participants who have graduated, are active, have dropped out, or were removed. One might expect differing outcomes for participants in these groups: Those who have graduated or are active would be expected to recidivate at a lower rate then those drug court participants who have dropped out or were removed from the program. To test this possibility, the drug court sample was separated into two groups, those who graduated or are active, and those who dropped out or were removed. This allowed us to determine if the likelihood of recidivism varies between drug court participants who have graduated or are active, drug court participants who have dropped out or were removed, and offenders who were traditionally adjudicated.

The bivariate recidivism analysis with the three different types of offenders is presented in Table 10. On all of the recidivism measures, drug court graduates/actives have lower rates than both the non-graduates and the traditionally adjudicated offenders. This suggests that there is a need to further investigate these differences between the three different types of offenders.

(Insert Table 10 about here)

The results of the logistic regression using arrest at 12 months as the dependent variable are shown in Table 11. In this regression the drug court sample was split into those participants who graduated/were active and those who dropped out/were removed; the reference category is traditionally adjudicated offenders. The model was significant

at the 0.05 alpha level. Sex, age, prior arrest, drug court graduate, and drug court non-graduate were all significant at the 0.05 level. This suggests that offenders who are young, who are male and who have a larger number of prior arrests are more likely to recidivate. Drug court graduates are less likely to recidivate than traditionally adjudicated offenders, while drug court non-graduates are more likely to recidivate then traditionally adjudicated offenders. These differences are confirmed by the predicted probabilities found in Table 11B. The estimated probability of a new arrest was 54 percent for drug court non-graduates, 43 percent for traditionally adjudicated offenders, and only 25 percent for drug court graduates/actives.

(Insert Table 11A and B about here)

In a logistic regression with arrest for a misdemeanor or felony in the 24 month follow-up period as the dependent variable, age, sex, black, drug court graduate, drug court non-graduate, and prior arrest were statistically significant at the 0.05 level. The model was significant at the 0.05 level. These results imply that those offenders who are young, black males with multiple prior arrests are more likely to recidivate. The offenders who are drug court graduates are less likely to recidivate than the traditionally adjudicated offenders. Those who are drug court non-graduates are more likely to recidivate than the traditionally adjudicated offenders. The results are presented in Table 12A and B.

(Insert Tables 12A and B about here)

Survival analysis was conducted with the three different types of offenders and arrest for a misdemeanor or felony in the 12 month follow-up. The model was significant

at the 0.05 level. Age, black, and drug court graduate were significant at the 0.05 level. The results imply that those offenders who are black and younger fail more quickly. Drug court graduates fail more slowly then the traditionally adjudicated offenders; there are, on the other hand, no significant differences between drug court non-graduates and traditionally adjudicated offenders. In fact, as can be seen in the survival plot, drug court graduates fail more slowly than traditionally adjudicated offenders.

(Insert Table 13 and Figure 3 about here)

Another survival analysis was conducted with the three different types of offenders and arrest for a misdemeanor or felony in the 24 month follow-up. The model was significant at the 0.05 level. Age, sex, black, drug court graduate, and drug court non-graduate were significant at the 0.05 level. This implies that those offenders who are young, black, and male fail more quickly. The drug court graduates fail more slowly than the traditionally adjudicated offenders, while the drug court non-graduates fail more quickly than the traditionally adjudicated offenders. The results can be seen in Table 14.

(Insert Table 14 about here)

The survival plot for the three different types of offenders can be seen in Figure 4. Again, the drug court non-graduates failed more quickly than the traditionally adjudicated and the drug court graduates. The traditionally adjudicated offenders failed at a faster rate than the drug court graduates. Drug court graduates failed at a much slower rate than the two other groups.

(Insert Figure 4 about here)

Multivariate Analysis of Failure to Appear

A logistic regression was conducted with an arrest for failure to appear as the dependent variable and the same control variables as above. The model was significant at the 0.05 level. Prior arrest, sex, black, Hispanic, drug court non-graduate, and drug court graduate were significant at the 0.05 level. Consistent with the results discussed above, drug court graduates were less likely, drug court non-graduates more likely, than traditionally adjudicated offenders to be arrested for failure to appear. Analysis of the likelihood of a conviction for failure to appear produced somewhat different results. Although drug court graduates were less likely than traditionally adjudicated offenders to be convicted for failure to appear, there was no difference in the likelihood of conviction between drug court non-graduates and traditionally adjudicated offenders. These results are found in Table 15A and B.

(Insert Tables 15A and B about here)

Analysis of Drug Court Participants and Urinalysis

The results of the logistic regression analysis of the dichotomous measure of urinalysis tests are presented in Table 16. This variable is coded 1 if the offender had at least one positive test and 0 if the offender did not test positive for drugs or alcohol. Only drug court participants are included at this stage of the analysis. The independent variables include the offender's marital status and number of dependent children, whether the offender was employed at the time of arrest, and the offender's treatment status, prior record, race/ethnicity, gender, and age. Treatment status is coded 1 if the offender had successfully completed the prescribed treatment program or was actively participating in

treatment; it was coded 0 if the offender did not successfully complete treatment, never started treatment, or was assigned and waiting for treatment. The model was significant at the 0.05 level. As shown in Table 16, treatment status was the only statistically significant variable at the 0.05 level. Offenders who had completed treatment or who were active in treatment were less likely than those who did not successfully complete treatment, never started treatment, or were assigned and waiting for treatment to test positive for drugs or alcohol.

(Insert Table 16 about here)

Ordinary least squares (OLS) regression was used to determine the predictors of the number of positive urinalysis tests, number of positives in first six months of participation, and the number of positives after six months of participation. The independent variables included in these regressions were number of prior arrests, age, sex, race/ethnicity, employed at time of arrest, married, number of dependents, and treatment. The first OLS regression used total number of positive urinalysis results as the dependent variable. The model was not significant at the 0.05 level but was significant at the 0.1 level. The R^2 was only 0.022, indicating that the independent variables explained very little of the variance in the number of positive results. Age and treatment status were significant at the 0.05 level. Older participants and those who successfully completed or were active in treatment had less positive results than younger participants and those who did not complete treatment. As indicated by the b value, participants who completed or were active in treatment had two fewer positive tests than those who did not enter or complete treatment.

(Insert Table 17 about here)

The next OLS regression had number of positives in first six months as the dependent variable. The model was significant at the 0.05 level. The R^2 for the model was 0.081. Treatment status and Hispanic were significant at the 0.05 level. Participants who successfully completed or were active in treatment had 1.74 fewer positives in the first six months than their counterparts. Hispanics had 1.58 more positives during the first six months than whites. There were no other race differences found in the results of the OLS regression.

(Insert Table 18 about here)

The final OLS regression used the number of positive urinalysis after six months of participation as the dependent variable. The model was significant at the 0.05 level. The r^2 for this model was 0.115. The variables of age and treatment were significant at the 0.05 level. Again, older participants and those who successfully completed or were active in treatment had less positives then those participants that did not complete treatment, or did not start treatment.

(Insert Table 19 about here)

SUMMARY AND DISCUSSION

This study evaluated the effectiveness of the Douglas County Drug Court. It compared the recidivism rates of drug court participants to those of traditionally adjudicated offenders. At first glance, there appeared to be no difference in recidivism rates between drug court participants and traditionally adjudicated offenders. However, further analysis, which divided the drug court sample into two groups- those who

graduated or were active and those who dropped out or were removed- revealed a different pattern of findings. These results suggest that participation in the Douglas County Drug Court reduces recidivism for participants who are active or have graduated as compared to traditionally adjudicated offenders. These findings are consistent with previous research on drug courts. That research found that drug courts reduce recidivism (Belenko, 1998; Finigan, 1998; Goldkamp,1994; NIJ, 2000; Peters and Murrin, 2000); this study supports those findings.

The results of the logistic regressions show that the likelihood of recidivism differs for participants who graduate or are active in the program and those who drop out or are removed from the program. Drug court graduates/actives are less likely than traditionally adjudicated offenders to recidivate, while drug court dropouts/removals are more likely than traditionally adjudicated offenders to recidivate. These results were found for arrest in the 12 and 24 month follow-up and with felony arrest in the 12 and 24 month follow-up. This finding is important because some of the past research focuses primarily on drug court participants who graduate.

One contribution of this study to the research on drug courts was the analysis of failure to appear arrests and convictions. The initial analysis revealed that failure to appear rates were very similar for the drug court and traditionally adjudicated samples. Further analysis, however, revealed that participants who either graduated or were active in drug court were less likely than traditionally adjudicated offenders to have a failure to appear arrest and conviction.

The primary predictors of positive urinalysis tests were found to be successful completion of/active in treatment and age. Not surprisingly, offenders who completed the prescribed course of treatment (or were in the process of doing so) had fewer dirty UA's than those who didn't receive the treatment they needed. No other research has focused on identifying the predictors of dirty drug tests. It may be important to know what the predictors of substance use are for individuals who are enrolled in the drug court program. This is important due to the fact that one of the goals of drug courts is to decrease substance use. If the predictors to dirty drug tests are known, policy changes can be made in order to possibly decrease the numbers of dirty drug tests.

Limitations

One of the limitations of this study involves an external validity problem. The results of this thesis can not be applied to other drug courts based on the fact that it is an evaluation and case study of Douglas County Drug Court. It also is hard to generalize these findings to other courts due to the fact that each court is set up (based on the needs of the jurisdiction) differently. Most of the research about drug courts are case studies. However, these case studies are an important basis for national research on drug courts. This thesis can provide valuable insight into the outcome (future recidivism) of a pre-adjudication drug court in the Midwest.

It is possible that the differences uncovered (between drug court non-graduates and traditionally adjudicated offenders) might reflect some type of contamination. There could be a tautology effect with regards to the participants who are removed from the drug court. There is a possibility that what prompts a removal from the drug court is a

new arrest, which would taint the results of the analysis and show that drug court non-graduates recidivated at a higher rate than traditionally adjudicated offenders. The data used in this analysis did not contain information on what lead to the removal of a participant from the drug court.

Another limitation is the use of arrest as the primary measure of recidivism. An arrest does not necessarily indicate that a person will be found guilty at the adjudication phase of the criminal justice process. Thus, an arrest does not always lead to a conviction. However, the previous research on drug courts also has used arrest as a measure of recidivism (Finigan, 1998; Goldkamp, 1994; NIJ, 2000; Peters and Murrin, 2000).

A final limitation concerns the treatment that was offered to drug court clients. Drug court clients were given different types of treatment based on their income assessments. These different treatments could lead to different effects on recidivism rates. A more detailed study would address the different types of treatment and the effectiveness of those treatments in reducing substance abuse. However, determining this would be difficult due to the fact that treatments are assigned on an individual basis.

Policy Implications

One policy implication is that the drug court should attmept to diversify treatment. This study revealed that offenders who were young, black, and male were more likely to recidivate. This could be due to the fact that the treatment providers were primarily white. Minority representatives as treatment providers may be an important factor in the treatment of minority substance abusers. One problem with the treatment

providers for the Douglas County Drug Court is the lack of diversity in the treatment field (Barnes, 2000). There are requests by participants to see treatment providers of their own race/ethnicity (Barnes, 2000). Other possible diversion programs may be more appropriate.

The results of the urinalysis data suggest another policy implication. The predictors of a dirty urinalysis were treatment status and age. This suggests that the drug court might focus more on ensuring that participants receive the prescribed treatment. The participants who were active or successful in treatment were less likely to have a positive urinalysis test than those participants who did not complete treatment or did not start treatment. Thus, treatment should play an important role in the life of the participant.

Directions for Future Research

Although the results of this study indicate that drug court participants who graduated or who were active in the program have lower recidivism rates than those who dropped out or were removed, they do not tell us whether time spent in the program is important. Previous research has demonstrated that the longer an individual stays in treatment, the less likely it is that she/he will recidivate. It is possible, then, that the dropouts who stayed in the program longer had lower recidivism rates than those who left the program early on.

Future research also could take a harm-reduction approach with regards to participant substance abuse. If the participant goes from using a hard drug to using a soft drug, is this considered a success? Is there an actual decrease in harm when switching to

a lesser drug? What classifies as a lesser drug? Although information regarding each type of drug tested positive for was included in the drug court data file, it was not included in the data set used for this thesis. One could determine if the drug court is reducing harm by decreasing the "hardness" of the drug used by the participant. The Douglas County Drug Court does have the underlying philosophy of harm reduction more than total abstinence. The court sees a decrease in the seriousness of the drug used as a success, but still recognize that future abstinence is the ultimate goal (Barnes, 2000).

The strain placed on the community treatment facilities could also be a topic of interest. Drug courts require diverse treatments but the facilities available may not be able to provide services to large numbers of drug court participants or may not be located in the community around the drug court. This places a strain on both the treatment facilities and the drug court. Another problem could be the friction between those individuals who seek treatment and are not in drug court and the drug court participants. Does the treatment first go to drug court participants or to private individuals seeking treatment?

Another topic of interest is whether or not the drug court matches the participant to the correct treatment. One could compare the treatment assessments and the level of treatment the participant receives. One could also look at the variety of treatments the participant goes through to determine if the correct treatment was given later in the program. For instance, if the individual was given outpatient treatment and at a later date sent to residential treatment, this could be seen as a mismatch to treatment. One could

also look at the assessments' recommendations to treatment and the treatment actually administered to the participant.

Net-widening is another concern. If the drug courts are set up to be diversion programs, than the participants eligible would be those bound for jail or prison. This may not be the case with some of the participants. It would be important to note if there is a net-widening effect or not.

CONCLUSION

As the number of drug courts in the United States has increased, questions have been raised about their effectiveness. This study evaluated the effectiveness of the Douglas County Drug Court by comparing the recidivism rates of drug court participants and traditionally adjudicated felony drug offenders. Although the results of the initial analysis showed that the recidivism rates of the two groups did not differ, further analysis called this conclusion into question. Drug court clients who graduated or were active in the program had significantly lower recidivism rates than traditionally adjudicated felony offenders; in contrast, drug court clients who dropped out or were removed from the program had significantly higher recidivism rates than felony drug offenders. Both of these findings attest to the effectiveness of the Douglas County Drug Court.

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TABLE 1. TREATMENT* OFFERED TO DOUGLAS COUNTY PARTICIPANTS

Treatments Offered	N	%
Therapeutic Community	6	1.9
Intensive Residential	4	1.3
Short Term Residential	22	7.1
Halfway House	11	3.5
Intensive Outpatient	123	39.7
Outpatient	125	40.3
Aftercare/Relapse Prevention	6	1.9
Other Treatment	13	4.2

*Treatment numbers based on initial treatment recommendations

TABLE 2. OFFENDER CHARACTERISTICS: DRUG COURT PARTICIPANTS AND TRADITIONALLY ADJUDICATED

	Drug Court Participants		Traditional Adjudication	
	N	%	N	%
RACE AND GENDER				
White Female	65	20.5	58	18.8
Black Female	27	8.5	29	9.4
Hispanic Female	5	1.6	2	0.6
White Male	131	41.3	130	42.1
Black Male	76	23.9	74	23.9
Hispanic Male	13	4.1	16	5.2
Age (mean)		31.1		30.8
PRIOR RECORD				
No. of prior felony arrests (mean)		0.85		1.82
No. of felony arrest in 12 months prior to current arrest (mean)		0.12		0.36
No. of arrests in 12 months prior to current arrest (mean)		0.84		1.49
NUMBER OF CASES	317		309	

TABLE 3. MEASURES OF RECIDIVISM

Variable Name	*Variable Description*	*Coding of Variable*
ARREST12	Arrested for a misdemeanor or felony during the 12-month follow-up period	1 = yes 0 = no
ARREST24	Arrested for a misdemeanor or felony during the 24-month follow-up period	1 = yes 0 = no
FELARR12	Arrested for a felony during the 12-month follow-up period	1 = yes 0 = no
FELARR24	Arrested for a felony during the 24-month follow-up period	1 = yes 0 = no
TIMEFAIL1	Number of months to first new arrest	interval, 1 to 12 not arrested = missing
TIMEFAIL2	Number of months to first new felony arrest	interval, 1 to 12 not arrested = missing
TIMEFAIL3	Number of months to first new arrest	interval, 1 to 24 not arrested = missing
TIMEFAIL4	Number of months to first new felony arrest	interval, 1 to 24 not arrested = missing
TOTPOST	Total number of positive urinalyses	interval, 0 to 99
POSFST6	Total number of positive urinalyses in first 6-months of drug court	interval, 0 to 99
POSLST6	Total number of positive urinalyses in after 6-months of drug court	interval, 0 to 99
POSTLAST	Positive urinalysis after 6-months drug court	1 = yes 0 = no
FTARRST	Failure to appear arrest	1 = yes 0 = no
FTACONVT	Failure to appear conviction	1 = yes 0 = no

TABLE 4. STATUS OF DRUG COURT PARTICIPANTS

	N	%
Successful Graduation	165	52.1
Active in Program	38	12.0
Dropped Out	15	4.7
Removed	99	31.2

TABLE 5. RECIDIVISM RATES: DRUG COURT PARTICIPANTS AND TRADITIONALLY ADJUDICATED

	Drug Court Participants		Traditional Adjudication	
RECIDIVISM RATES	N	%	N	%
Arrested (misd. or felony) 12-month				
Yes	126	39.7	155	50.2
No	191	60.3	154	49.8
Arrested (misd. or felony) 24-month				
Yes	107	54.0	154	59.5
No	91	46.0	105	40.5
Arrested (felony) 12-month				
Yes	59	18.6	78	25.2
No	258	81.4	231	74.8
Arrested (felony) 24-month				
Yes	61	30.8	92	35.5
No	137	69.2	167	64.5
Failure to Appear Arrest				
Yes	134	42.4	144	48.0
No	182	57.6	156	52.0
Failure to Appear Conviction				
Yes	29	9.2	46	15.3
No	287	90.8	254	84.7
Positive UA after 6-months				
Yes	158	60.1	*	*
No	105	39.9	*	*
Number of Positives (mean)		5.26		
first 6months (mean)		2.83		
after 6 months (mean)		3.04		
No. of Arrests (mean)		1.61		
No. of Felony Arrests (mean)		.50		

* UA results for Drug Court Participants only

TABLE 6A & B. MULTIVARIATE ANALYSIS OF ARREST FOR A MISDEMEANOR OR FELONY IN MONTHS: THE EFFECT OF TYPE OF PROGRAM

A. ANALYSIS OF ARREST FOR MISDEMEANOR OR FELONY IN 12 MONTHS

	B	SE	Odds Ratio
Type of Case			
Drug Court (1)	-.32	.17	.727
Offender Age	-.03*	.01	.972
Offender Gender (Male=1)	.37	.19	1.444
Offender Race (whites are the reference category)			
African-American	.44*	.19	1.557
Hispanic	-.64	.40	.530
No. of arrests in 12 months prior to current offense	.24*	.05	1.271

B. PREDICTED PROBABILITIES

	Probability*
Drug Court	.35
Traditionally Adjudicated	.43

* Probabilities calculated for white males (which compromise a larger proportion of the samples) of average age.

TABLE 7A & B. MULTIVARIATE ANALYSIS OF ARREST FOR A MISDEMEANOR OR FELONY IN MONTHS: THE EFFECT OF TYPE OF PROGRAM

A. ANALYSIS OF ARREST FOR MISDEMEANOR OR FELONY IN 24 MONTHS

	B	SE	Odds Ratio
Type of Case			
Drug Court (1)	-.11	.20	.898
Offender Age	-.03*	.01	.966
Offender Gender (Male=1)	.54*	.22	1.720
Offender Race (whites are the reference category)			
African-American	.54*	.23	1.715
Hispanic	-.71	.46	.494
No. of arrests in 12 months prior to current offense	.30*	.08	1.353

*Significant at the 0.05 alpha level

B. PREDICTED PROBABILITIES

	Probability*
Drug Court	.46
Traditionally Adjudicated	.49

* Probabilities calculated for white males (which compromise a larger proportion of the samples) of average age.

TABLE 8: RESULTS OF SURVIVAL ANALYSIS DURING 12 MONTH FOLLOW-UP

	b	SE
Drug Court (1)	-.19	.12
Age	-.02*	.007
Sex	.26	.14
Offender Race (Whites are the reference category)		
Black	.27*	.13
Hispanic	-.48	.33
Prior Arrest in 12 Months	.12*	.02

*Significant at the 0.05 alpha level

TABLE 9: RESULTS OF SURVIVAL ANALYSIS DURING 24 MONTH FOLLOW-UP

	b	SE
Drug Court (1)	-.06	.13
Age	-.02*	.007
Sex	.38*	.15
Offender Race (Whites are the reference category)		
Black	.28*	.13
Hispanic	-.50	.34
Prior Arrest in 12 Months	.11*	.02

*Significant at the 0.05 alpha level

TABLE 10. RECIDIVISM RATES: DRUG COURT GRADUATES, REMOVED FROM DRUG COURT, AND TRADITIONALLY ADJUDICATED

	Drug Court Graduate		Drug Court Non-Graduate		Traditionally Adjudicated	
RECIDIVISM RATES	N	%	N	%	N	%
Arrested (misd. or felony) 12-month						
Yes	56	27.6	70	61.4	155	50.2
No	147	72.4	44	38.6	154	49.8
Arrested (misd. or felony) 24-month						
Yes	44	35.5	63	85.1	154	59.5
No	80	64.5	11	14.9	105	40.5
Arrested (felony) 12-month						
Yes	17	8.4	42	36.8	78	25.2
No	186	91.6	72	63.2	231	74.8
Arrested (felony) 24-month						
Yes	19	15.3	42	56.8	92	35.5
No	105	84.7	32	43.2	167	64.5
Failure to Appear Arrest						
Yes	53	26.2	81	71.1	144	48
No	149	73.8	33	28.9	156	52
Failure to Appear Conviction						
Yes	10	5	19	16.7	46	15.3
No	192	95	95	83.3	254	84.7
Positive UA after 6-months						
Yes	117	57.6	41	68.3	*	*
No	86	42.4	19	31.7	*	*

TABLE 11A & B. MULTIVARIATE ANALYSIS OF ARREST FOR A MISDEMEANOR OR FELONY: THE EFFECT OF TYPE OF PROGRAM

A. ANALYSIS OF ARREST FOR MISDEMEANOR OR FELONY IN 12 MONTHS

	B	SE	Odds Ratio
Type of Case			
Drug Court Graduate (1)	-.81*	.20	.445
Drug Court Non-Graduate (1)	.46*	.23	1.587
Offender Age	-.03*	.01	.972
Offender Gender (Male=1)	.38*	.19	1.458
Offender Race (whites are the reference category)			
African-American	.36	.19	1.428
Hispanic	-.64	.41	.528
No. of arrests in 12 months prior to current offense	.22*	.05	1.244

B. PREDICTED PROBABILITIES

	Probability*
Drug Court Graduate	.25
Drug Court Non-Graduate	.54
Traditionally Adjudicated	.43

* Probabilities calculated for white males (which compromise a larger proportion of the samples) of average age.

TABLE 12A & B. MULTIVARIATE ANALYSIS OF ARREST FOR A MISDEMEANOR OR FELONY: THE EFFECT OF TYPE OF PROGRAM

A. ANALYSIS OF ARREST FOR A MISDEMEANOR OR FELONY IN 24 MONTHS

	B	SE	Odds Ratio
Type of Case			
Drug Court Graduate (1)	-.08*	.24	.448
Drug Court Non-Graduate (1)	1.36*	.36	3.892
Offender Age	-.03*	.01	.969
Offender Gender (Male=1)	.55*	.23	1.732
Offender Race (whites are the reference category)			
African-American	.51*	.24	1.661
Hispanic	-.58	.47	.557
No. of arrests in 12 months prior to current offense	.27*	.08	1.310

*Significant at the 0.05 alpha level

B. PREDICTED PROBABILITIES

	Probability*
Drug Court Graduate	.46
Drug Court Non-Graduate	.79
Traditionally Adjudicated	.48

* Probabilities calculated for white males (which compromise a larger proportion of the samples) of average age.

TABLE 13: RESULTS OF SURVIVAL ANALYSIS DURING 12 MONTH FOLLOW-UP

	b	SE
Type of Case		
Drug Court Graduate	-.68*	.16
Drug Court Non-Graduate	.25	.15
Age	-.02*	.007
Sex	.27	.14
Offender Race (Whites are the reference category)		
Black	.30*	.13
Hispanic	-.48	.33
Prior Arrest in 12 Months	.07	.08

*Significant at the 0.05 alpha level

TABLE 14: RESULTS OF SURVIVAL ANALYSIS DURING 24 MONTH FOLLOW-UP

	b	SE
Type of Case		
Drug Court Graduate	-.63*	.17
Drug Court Non-Graduate	.51*	.15
Age	-.01*	.007
Sex	.38*	.15
Offender Race (Whites are the reference category)		
Black	.34*	.13
Hispanic	-.45	.34
Prior Arrest in 12 Months	.08	.08

*Significant at the 0.05 alpha level

TABLE 15A & B. MULTIVARIATE ANALYSIS OF ARREST AND CONVICTION OF FAILURE TO APPEAR

A. ANALYSIS OF ARREST FOR FAILURE TO APPEAR

	B	SE	Odds Ratio
Type of Case			
Drug Court Graduate (1)	-.82*	.21	.440
Drug Court Non-Graduate (1)	.97*	.25	2.634
Offender Age	-.02	.01	.983
Offender Gender (Male=1)	.39*	.20	1.483
Offender Race (whites are the reference category)			
African-American	.65*	.19	1.919
Hispanic	-.90*	.44	.407
No. of arrests in 12 months prior to current offense	.16*	.05	1.179

B. ANALYSIS OF CONVICTION FOR FAILURE TO APPEAR

	B	SE	Odds Ratio
Type of Case			
Drug Court Graduate (1)	-1.04*	.37	.352
Drug Court Non-Graduate (1)	.07	.31	1.074
Offender Age	-.01	.01	.988
Offender Gender (Male=1)	.57	.32	1.765
Offender Race (whites are the reference category)			
African-American	.83*	.26	2.293
Hispanic	-.50	.76	.608
No. of arrests in 12 months prior to current offense	.13*	.05	1.139

*Significant at the 0.05 alpha level

TABLE 16. MULTIVARIATE ANALYSIS OF POSITIVE URINALYSIS AFTER SIX MONTHS OF PARTICIPATION IN DRUG COURT

	B	SE	Odds Ratio
Treatment (successful or active = 1)	-1.11*	.37	.330
Employed at Time of Arrest (yes = 1)	-.08	.28	.926
Married (married = 1)	.08	.39	1.086
Number of Dependents	-.12	.09	.891
Offender Age	-.01	.02	.990
Offender Gender (Male=1)	.28	.30	1.324
Offender Race (whites are the reference category)			
African-American	-.37	.31	.690
Hispanic	-.76	.56	.466

*Significant at the 0.05 alpha level

TABLE 17: OLS REGRESSION RESULTS WITH TOTAL NUMBER OF POSITIVES AS DEPENDENT VARIABLE

	b coefficient	SE	Beta
R^2		0.022	
Treatment (successful or active=1)	-2.06*	.81	-.16
Prior Arrests in 12 months	-.30	.23	-.08
Employed at Time of Arrest (employed=1)	.03	.70	.003
Number of Dependents	-.13	.23	-.04
Marital Status (married=1)	-.31	.98	-.02
Age	-.09*	.04	-.14
Sex (male=1)	.59	.75	.05
African-American	.25	.76	.02
Hispanic	.04	1.47	-.001

* Significant at the 0.05 alpha level

TABLE 18: OLS REGRESSION RESULTS WITH TOTAL NUMBER OF POSITIVES IN FIRST SIX MONTHS AS DEPENDENT VARIABLE

	b coefficient	SE	Beta
R^2		0.081	
Treatment (successful or active=1)	-1.74*	.44	-.25
Prior Arrests in 12 months	-.07	.12	-.03
Employed at Time of Arrest (employed=1)	.04	.38	.01
Number of Dependents	-.03	.12	-.01
Marital Status (married=1)	-.18	.53	-.02
Age	-.01	.02	.03
Sex (male=1)	.26	.40	.04
African-American	-.13	.41	-.02
Hispanic	1.58*	.79	.11

*Significant at the 0.05 alpha level

TABLE 19: OLS REGRESSION RESULTS WITH TOTAL NUMBER OF POSITIVES AFTER SIX MONTHS AS DEPENDENT VARIABLE

	b coefficient	SE	Beta
R^2		0.115	
Treatment (successful or active=1)	-1.38*	.67	-.13
Prior Arrests in 12 months	-.22	.18	-.07
Employed at Time of Arrest (employed=1)	.04	.57	.01
Number of Dependents	-.14	.18	-.05
Marital Status (married=1)	-.08	.79	-.01
Age	-.12*	.03	-.24
Sex (male=1)	.46	.60	.05
African-American	.34	.62	.04
Hispanic	-2.14	1.15	-.11

*Significant at the 0.05 alpha level

Figure 1

Survival Distribution of Time to New Arrest

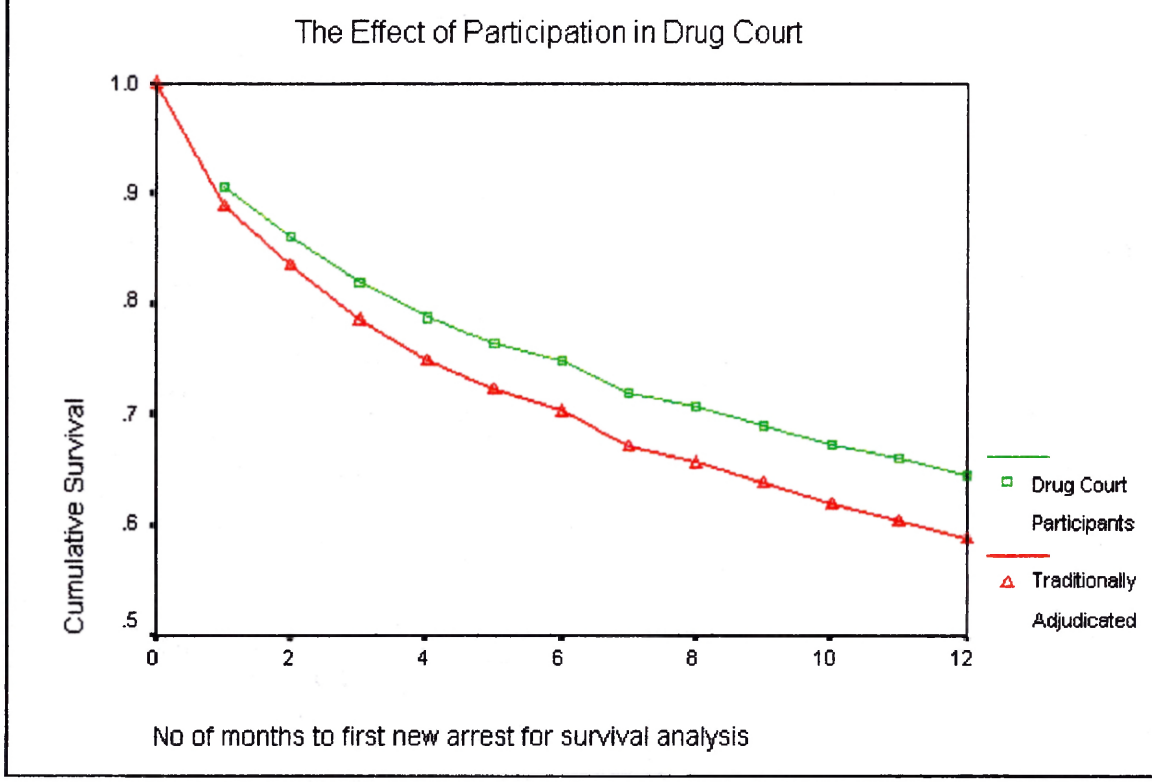

Figure 2

Survival Distribution of Time to New Arrest

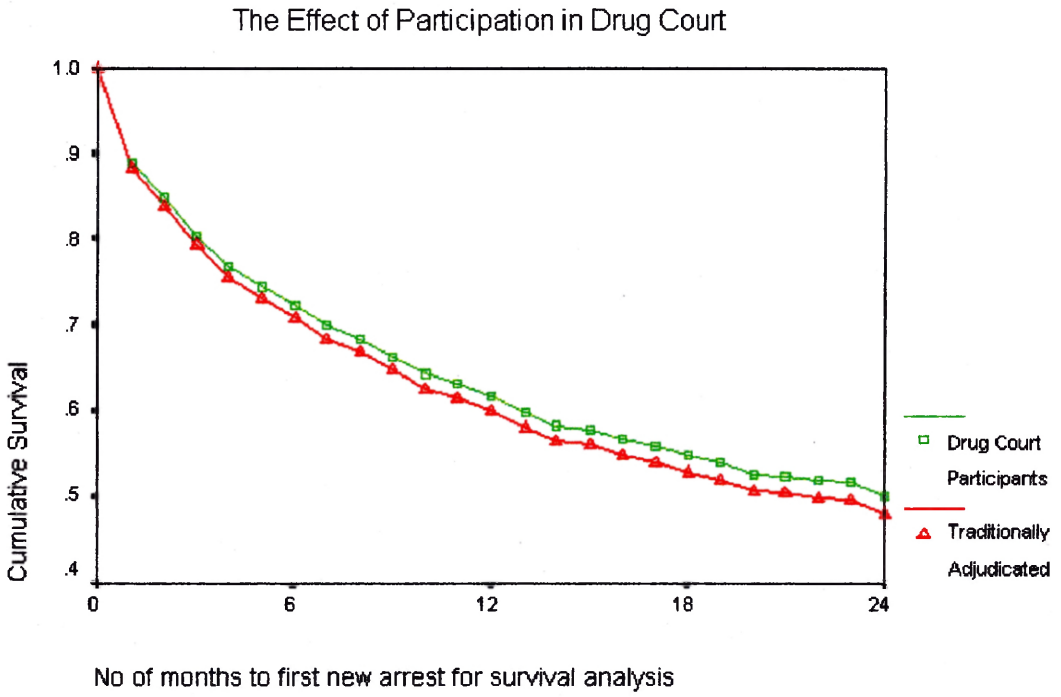

Figure 3

Survival to New Arrest in 12 Months

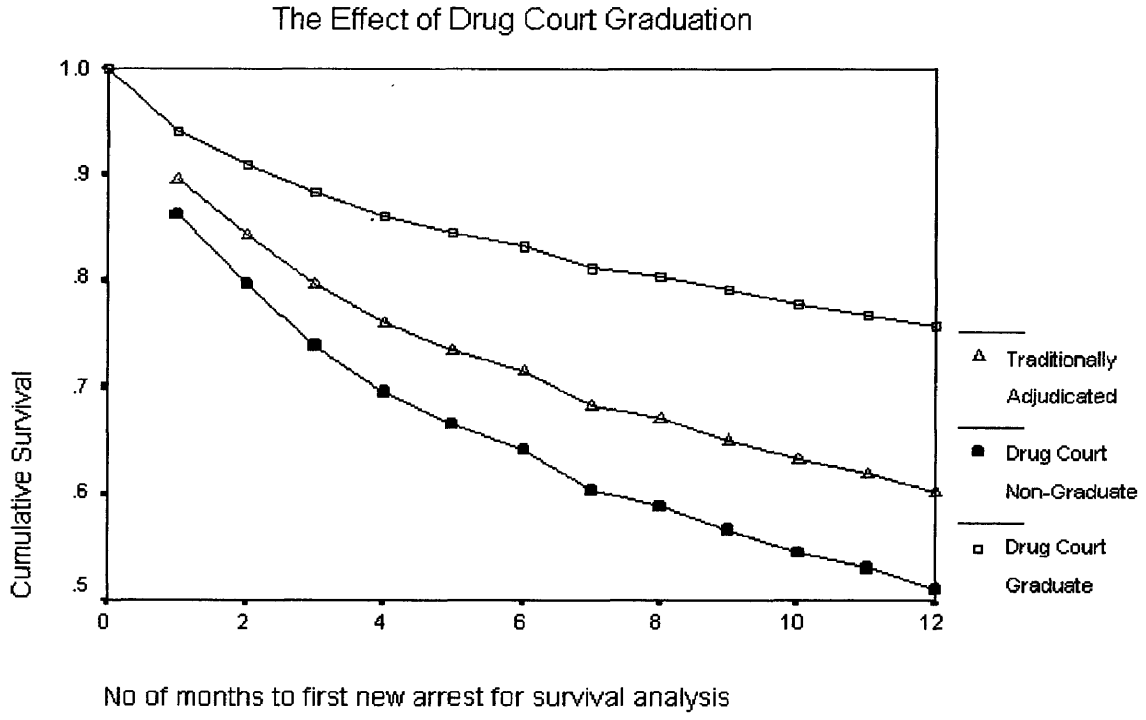

Figure 4

Survival to New Arrest in 24 Months