Criminal Arrest Patterns of Clients Entering and Exiting Community Substance Abuse Treatment in Lucas County Ohio, USA

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ABSTRACT

Research on drugs and crime typically examines the substance abuse histories of criminal offenders. This study reverses the typical perspective by examining the criminal histories of adult clients served through publicly funded and community based substance abuse treatment agencies. The findings of this study showed that 64% of the clients entering community substance abuse treatment had histories of arrests for violent and/or nonviolent criminal crimes. In the year directly prior to treatment entry 27% of the clients had been arrested. In the 12-months following discharge from treatment 25% of the clients were arrested. While there was not a substantial difference in the percent of clients arrested in the pre and post-treatment periods, there was a difference in the pattern of arrests. The average number of arrests per client was reduced in most arrest categories. These reductions attain statistical significant reduction in the case of drug offenses. A logistic regression analysis showed that income, martial status and arrest in the 12-months prior to treatment significantly affected the likelihood of clients' arrests in the post-treatment period.

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Research supports an association between substance abuse and crime (Cantor, 1999; Farabee, Joshi, & Anglin, 2001; Harrison, 2001**,** Speckart & Anglin, 1986). Typically, these studies examine the substance abuse patterns and types of crimes committed by persons who are or have been under some form of criminal justice control. Researchers have investigated the percentages of persons with substance abuse problems who are in jails, prisons, or on probation and parole (Ditton, 2001). The current study investigated the issues of substance abuse and crime from a different perspective. Rather than examining the substance abuse patterns of offenders, this study investigated the pre and post-treatment arrest patterns of a sample of substance abusers in publicly funded community treatment programs. Surprisingly, there is little research examining arrests patterns of clients entering and exiting community substance abuse treatment.

Literature Review

Substance Abuse and Crime

There are more than two million people incarcerated in the U.S. (Harrison, 2002). More than 50% of inmates in state prisons and local jails were reportedly under the influence of alcohol or drugs at the time of their criminal offense (Ditton, 2001). Data from the Arrested Drug Abuse Monitoring (ADAM) program indicated that 60% of all arrested persons tested positive for drugs, not including alcohol (ADAM, 2000). Substance abuse histories are also common among offenders on probation and parole (Glaze, 2001; Mumola, 1998).

Research supports an association between substance use and crime, particularly property crime (Anglin & Speckart, 1988; De Li, Priu, & Mackenzie, 2000). In a study on addiction and criminal activity among methadone maintenance patients, Anglin and

Speckart (1988) found that during periods of elevated drug use there was an associated increase in criminal activity, specifically property crime and drug dealing.

While property crime and drug use have been most associated, some studies have also found a correlation between violent crime and drug abuse (Chaiken & Chaiken, 1990; Dawkins, 1997; Inciardi & Pottieger, 1994). McCoy, Messiah and Yu (2001) compared the self-reported violent acts of chronic drug users to non-chronic drug users and found that chronic drug users were significantly more likely to report violence offenses than non-chronic users. Additionally, they found that chronic users reported a significantly higher likelihood of arrest than non-chronic users, and that men, Blacks and younger people had significantly higher rates of self-reporting acts that constitute violent crimes (McCoy et al., 2001).

In a study of narcotic addicts, Shaffer, Nurco and Kinlock (1984) found that crime rates during periods of substance abuse were seven times higher than periods of non-use. The U.S. Bureau of Justice Statistics (1992) reported that criminals who abused drugs committed more crimes than non-users, particularly during periods of excessive drug use.

Community Substance Abuse Treatment Clients

The Substance Abuse and Mental Health Service Administration [SAMHSA] issued a report in 2002 addressing the characteristics of clients admitted to publicly funded substance abuse treatment programs throughout the United States from 1992 to 2000. The SAMHSA (2002) report provided extensive demographic, socioeconomic and substance

abuse profiles of clients entering treatment. Nationally, men made up 70% of treatment admissions. Whites made up approximately 60% of the admissions to substance abuse treatment. When compared to the general population, economically disadvantaged persons were over-represented in admission to publicly funded substance abuse treatment services. Eighty-eight percent of the persons entering substance abuse treatment were between 18 and 54 years of age. The four most common drugs reportedly used were alcohol, opiates (primarily heroin), cocaine, and/or marijuana/hashish. These substances together accounted for 91% of the treatment admissions.

In spite of its comprehensive nature, the SAMHSA (2002) report did not address the arrest histories of clients entering substance abuse treatment. Given the association between drugs and crime, common sense dictates that ex-offenders are among the clients who seek substance abuse treatment through the publicly funded community services; however, there is a paucity of research on arrest patterns of persons entering and exiting community based substance abuse treatment.

Methods

Study Site and Sample selection

The study site was Lucas County, Ohio, which includes the metropolitan Toledo area. The study group consisted of adult clients who received services in calendar year 2000, through substance abuse treatment agencies publicly funded by the Lucas County Alcohol and Drug Addiction Services (LC-ADAS) Board. The study excluded persons in jail or prison who were receiving substance abuse treatment. Also excluded were

specialized programs for criminal justice clients, such as drug court or TASC. The publicly funded substance services included in this study were open to all persons in the community with substance abuse problems. Criminal justice system involvement was not a criterion for service. Clients may or may not have had histories of criminal arrests.

The LC-ADAS Board maintained a computerized records system of all clients who enrolled in and received services through an LC-ADAS funded agency. To generate a sample of adult clients enrolled and served during calendar year 2000, a list of all dates on which clients could enroll was listed. Using an SPSS random selection program, 24 of the enrollment dates were selected. The resulting sample consisted of 263 adult clients who had enrolled in and received community substance abuse treatment service during calendar year 2000.

Data Collection, Definitions and Coding

Demographic data on clients was also collected through the LC-ADAS Boards computerized records system. Available demographic information was limited to clients' gender, race, age, self-reported marital status, and self-reported income in the month prior to enrollment. Information on identity of the substance(s) abused was not available in the LC-ADAS database.

A Lucas County criminal justice agency generated arrest record information on all sample cases. All charges in the clients' adult criminal histories, regardless of court

dispositions, were recorded. The limitation of the charge information is that out-of-state arrests and juvenile records were excluded.

Criminal charges were coded as violent felonies, nonviolent felonies, violent misdemeanors and nonviolent misdemeanors according to the Ohio Revised Code and Toledo Municipal Code. Drug and alcohol charges were counted in the appropriate category and then recorded separately as drug felonies or alcohol/drug misdemeanors. Motor vehicle violations which were considered minor misdemeanors were not counted as criminal offenses. Common examples of minor motor vehicle violations were speeding, running a red light, and failure to yield. Driving while under the influence and driving with suspended license, which are classified as serious misdemeanors, were coded as criminal conduct, specifically as nonviolent misdemeanors.

Results

Sample Demographics

Table 1 provides a description of the 263 sample cases. One hundred and fifty seven clients were male (60%) and 106 were female (40%). The racial distribution of the sample was 158 white clients (60%), 95 black clients (36%), and 9 identified as other (3%). Only 57 clients reported that they were married (23%). The average age for clients was almost 33 year. Most (62%) of the clients were under 36 years of age with 34% being 25 years of age or younger. As would be expected with publicly funded services, most clients reported low monthly incomes for the month prior to enrollment. While the

average monthly income reported was just over $490, more than half (54%) of the sample cases reported a monthly income of less than $100.

Table 1 *Sample Demographic Characteristics (N=263)*

Characteristics	Number	Percent
Gender		
Male	157	59.7 %
Female	106	40.3 %
Race		
White	158	60.3 %
Black	95	36.3 %
Other	9	3.4 %
Marital Status		
Married	57	23.0 %
Single	151	60.9 %
Divorced	38	15.3 %
Widowed	2	0.8 %
	Mean (Standard Deviation)	Minimum - Maximum
Age in Years	32.61 (18.61)	18 – 61
Monthly Income	$490.27 ($716.04)	$0 - $3,360

Criminal History

One hundred and sixty eight (64%) of the sampled clients had a history of one or more felony and/or misdemeanor charges prior to receiving substance treatment from an LC-ADAS funded agency. The 168 clients with criminal histories collectively accumulated

63 violent felony charges, 206 nonviolent felonies, 299 violent misdemeanors, and 1007 nonviolent misdemeanors. About 46% of the 206 nonviolent felony charges were for drug charges. Domestic violence was the most common violent misdemeanor, accounting for 30% of the 299 violent misdemeanor charges. Alcohol and drug charges accounted for 33% of the 1007 nonviolent misdemeanors. Table 2 provides the average number of 168 charges in the clients' criminal histories by offense types.

Table 2 *Mean Number of Criminal Charges by Offense Type for Clients with a Criminal History (N=168)*

Offense Type	Mean	Standard Deviation
Violent Felony	0.38	0.77
Non-Violent Felony	1.23	0.21
Drug Felony	0.56	1.21
Violent Misdemeanor	1.78	3.79
Domestic Violence	0.53	1.04
Non-Violent Misdemeanor	6.05	8.05
Alcohol or Drug Misdemeanor	1.98	2.91

12- Month Pre-Treatment Arrests

In the 12-months directly prior to treatment 71 (27%) of the 263 clients had been arrested on one or more charges. Cumulatively these 71 offenders were arrested for five violent felonies and 38 non-violent felonies. Twenty of these 38 non-violent felonies were felony drug offenses which consist of possession of large quantities of drugs and/or trafficking in drugs. The 71 clients arrested in the year prior to treatment had collectively accumulated 23 violent misdemeanors. Domestic violence accounted for 10 (43%) of the 23 arrests for violent misdemeanors. In the year prior to treatment, non-violent

misdemeanors were the most common offense on which clients were arrested. Collectively the 71 clients arrested in the year prior to treatment had 115 arrests for non-violent misdemeanors. Alcohol or drug charges, such a drug possession or disorderly conduct intoxification accounted for 56 (47%) of the 115 non-violent misdemeanor arrests.

12-Month Post Treatment Arrests

Because 9 of the 263 sample clients were still in treatment at the time of this study, they were excluded from the 12-month follow-up. Of the 254 clients who had been out of treatment for a year or more, 75% were not arrested on any charge in the 12-months directly following treatment. Sixty four (25%) of the 254 clients were arrested during the 12-month follow-up period. The 64 clients who were arrested during the follow-up period were collectively charged with 4 violent felonies, 18 nonviolent felonies (6 were drug charges), 18 violent misdemeanors (8 were domestic violence charges), and 45 nonviolent felonies (20 were alcohol or drug charges).

A logistic regression analysis was conducted to determine the effects of background factors and arrest history on the probability of arrest in the 12-months following substance abuse treatment. Logistic regression was used because the dependent variable was a dichotomous measure (Liao, 1994; Tabachnick & Fidell, 2001), 12-months following treatment without arrest. Arrest in the year prior to treatment rather than total arrest history was the arrest variable selected for inclusion in the analysis. The selected variable reflected most recent arrests. Both arrest variables were not included in the

analysis due to data overlap and concerns regarding multi-colinearity. Table 3 shows the results of the logistic regression analysis.

Table 3 *Logistic Regression Results: The Impact of Background and Arrest Variables on Remaining Arrest Free 12- Months Following Substance Abuse Treatment*

	Model I		Model II	
Variable	B	Exp (B)	B	Exp (B)
Gender	-.688 *	.502	-.598	.550
Race	.400	1.492	.324	1.382
Age	-.016	.984	-.017	.984
Married	-.819 *	.441	-.821 *	.440
Income	.001.*	1.001	.001 *	.1001
Arrest in 12-months prior to treatment			-.973 **	.378
Nagelkerke R-Squared	.097		.145	

*p< .05 **p< .01 ***p< .001

Coding: Remaining arrest free 12 months after discharge was the dependent variable and was coded as 1 = not arrested and 0 = arrested. Arrest in the12-months prior was coded as 1 = not arrested and 0 = arrested. Sex was measured as 0 = female and 1 = male. Race was measured as 0 = Nonwhite and 1 = White. Age at enrollment was measured in continuous years. Married was measured as 0 = not married and 1 = married. Income was measured in dollars and represented the income of the person in the month before enrollment in drug treatment.

Note: B represents the logistic coefficient, the log odds of not being arrested during the 12 months after discharge while controlling for the other independent variables. A positive coefficient indicates an increase in the log odds of being arrest free with an increase in the independent variable, while a negative coefficient indicates an increase in the log odds of being arrested as the independent variable increases (Liao, 1994).

Exp (B) represents the odds ratio of being arrest free for a one unit increase in the independent variable. An odds ratio greater than one indicates an increased odds of remain arrest free one year after the completion for the program with a one unit increase in the independent variable. An odds ratio less than one indicates a decreased odds of being arrest free (i.e., greater odds of being arrested) during the one year after the program with an increase in the independent variable (Tabachnick & Fidell, 1996).

Nagelkerkre R-Squared is similar to R-squared in linear regression. It represents an estimate of the amount of variance in the dependent variable accounted for by the independent variables (Tabachnick & Fidell, 2001). It can range from 0 (i.e., 0% of the variance of the

dependent variable is explained) to 1 (i.e., 100% of the variance of the dependent variable is explained).

Finally, the Wald statistic was used to determine if a variable had a statistically significant effect on the dependent variable.

Two models were tested with logistic regression. Model I included the background variable of gender, race, age, marital status and income. Of these variables only gender, marital status and income were found to be significantly associated with the dependent variable. Model I accounted for nearly 10% of the variance in a clients likelihood of arrest in the 12-months following treatment. Model II added the prior arrest variable to the analysis. In the second model age, marital status and the prior arrest variable were the only variables which attained statistical significance with the dependent variable. Model II increased the variance explained to 14.5%.

While arrest in the 12-months prior to treatment was significantly associated with arrest in the 12-months following treatment there were some statistically significant reduction in arrests for certain offenses. Table 4 shows the mean comparisons by offense types between the 12-month pre and post-treatment periods. The table shows that the mean for violent felony arrests did not change between the pre and post-treatment periods. The means for all other offenses were lower in the 12-month post-treatment period than in the 12 month pre-treatment period. T-test comparisons were run to determine if any of the mean reductions attained statistical significance. The reductions in drug felonies (t=1.99, sig. =.047) and alcohol /drug misdemeanors (t=2.823, sig. =.005) were the only decreases that attained statistical significance.

Table 4 *12-Month Pre and Post-Treatment Mean Comparisons by Arrest Type*

Arrest Type	12-months Pre-Treatment		12-months Post-Treatment	
	Mean	Std. D	Mean	Std. D.
Violent Felony	.020	.226	.020	.165
Non-Violent Felony	.146	.627	.079	.311
Drug Felony	.079	.358	.028	.187
Violent Misdemeanor	.091	.361	.071	.286
Domestic Violence	.043	.222	.032	.175
Non-Violent Misdemeanor	.445	1.217	.362	.979
Alcohol or Drug Mis.	.221	.658	.095	.341

Discussion

This study found that 64% of the people entering community substance abuse treatment had a history of one or more criminal arrests. In the 12-months directly prior to treatment 27% of the clients had been arrested. In the 12- months following treatment 25% of the clients were arrested. While the percent of clients who were arrested in the pre and post-treatment period did not differ substantially their arrest patterns did differ. There were no increases in the average number of arrests between the pre and post-treatment period. There were reductions in the average number of arrests in all categories accept for violent felonies. These reductions attained statistical significance in drug and alcohol arrests at both the felony and misdemeanor level.

Based upon the logistic regression results those at highest risk of arrest in the 12-months following treatment are individuals with lower incomes who are married and have a prior history of arrest in the 12-month before treatment. Women showed a lower risk of arrest after treatment than men until the prior arrest variable was added to the logistic regression model.

In terms of comparison, the demographic characteristics of clients accessing publicly funded substance abuse services in Lucas County Ohio are relatively consistent with year 2000 national data on client demographics (SAMHSA, 2002). Whites made up approximately 60% of the admission to substance abuse treatment both nationally and in LC-ADAS in 2000. Economically disadvantaged persons are over-represented in admission to substance abuse treatment services nationally (SAMHSA, 2002). In the LC-ADAS sample, 54% of the clients reported an income of less than $100 in the month directly prior to beginning services. In 2000, 88% of the persons entering substance abuse treatment throughout the country were between 18 and 54 years of age versus 93% of the clients in the LC-ADAS sample. Nationally, men made up 70% of the admission to substance abuse treatment in 2000 versus 60% of the LC-ADAS sample. It appears that the LC-ADAS sample is not much different demographically from clients served nationally. Since national data on clients admitted to substance abuse treatment does not report comprehensive information on clients' criminal arrests, the results of this study should help to estimate the arrest patterns of substance abuse clients entering and exiting community treatment; however, additional research on a national sample is still necessary.

Clearly there is a need for additional investigation of substance abuse service variables and other factors that may affect clients' likelihood of arrest in the 12-months following treatment. Only 14.5% of the variance in post-treatment arrests were explained by the variable examine in this study.

Summary and Implications

The findings of this study suggest that most clients entering publicly funded and community based substance abuse treatment had a history of criminal arrests. More than 60% of the clients entering LC-ADAS community substance abuse treatment services had a history of arrest in the 12-months directly prior to treatment. Over one quarter of these community clients had a history of arrest in the 12-months directly following treatment. This study showed that clients with criminal histories, specifically recent criminal histories, have a higher likelihood of arrest the 12-months following treatment, than clients without prior arrests. Low income and marital status are too other factors that increase clients' risk of arrest after leaving treatment. Clients with these risk factors may benefit from additional support during the post-treatment period.

While there were not substantial differences in the percent of clients who were arrested in the 12-months prior to treatment and the 12-months after treatment there were differences in arrest patterns. The average number of violent felonies was very low and remained virtually unchanged between the pre and post-treatment periods. The average numbers of client arrests were reduced in all other offenses categories. In the case of alcohol and drug arrests the reduction from 12-months before treatment to the 12-months following treatment attained statistical significance. This finding suggests that community substance abuse treatment, at least in Lucas County, Ohio, is having the intended impact. Clients exiting community substance abuse treatment have a reduced likelihood of arrest on drug and alcohol offenses.

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