

**RECIDIVISM OF OFFENDERS ASSIGNED TO COMMUNITY
CORRECTIONS PROGRAMS OR RELEASED FROM PRISON
IN NORTH CAROLINA: FISCAL YEAR 1992-93**

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The opinions expressed in this report are those of the authors. The North Carolina Sentencing and Policy Advisory Commission is not responsible for any of the data presented or statements made in this report.

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Summary

In accordance with a contractual agreement with the North Carolina Sentencing and Policy Advisory Commission, the authors analyzed recidivism of offenders placed on probation or released from prison during fiscal year 1992-93, July 1 through June 30. The study included 33,111 offenders under sentence for crime other than misdemeanor traffic offenses. The data were obtained from the North Carolina Department of Correction, the State Bureau of Investigation Division of Criminal Information (DCI), and other sources. Offenders were tracked using DCI records for an average of 36.7 months for any subsequent fingerprinted arrest.

Fourteen programs or sentence conditions were studied. Rearrest rates and predictors of rearrest were compared for offenders in the various programs. The study examined several categories of rearrest: violent offenses, felonious sexual offenses, property offenses, drug offenses, and other offenses.

Logistic regression was used to estimate the contribution of various factors toward being rearrested or avoiding rearrest, including extra-program variables such as age, race, gender, marital status, current offense and prior arrest record.

Like the initial study conducted by Stevens Clarke and Anita Harrison, this study was not a controlled experiment. The interpretation of any results should be tentative. A statistical correlation does not prove a causal relationship. As is the case with any attempt to predict an outcome, there may be more factors at work leading to the outcome than are known to the researcher.

Of the 33,111 offenders examined, 22,315 (67.4%) avoided rearrest during the follow-up period. The remaining 10,796 (32.6%) were rearrested at least once during the follow-up period. 2906 (8.8%) of the 33,111 were rearrested for a violent offense; 1247 (3.8%) were rearrested for a felonious sex offense; 6,602 (19.9%) were rearrested for a property offense; 4,039 (12.2%) were rearrested for a drug offense; 2,146 (6.5%) were rearrested for some other type of offense.

According to the 15 logistic regression models constructed and analyzed, the variables which showed the most consistent indicators of rearrest during the time frame examined were: 1) the squared value of prior arrests; 2) intensive probation; 3) African-American; 4) regular parole; 5) being a male; and 6) being under sentence for a felonious drug offense.

The three variables which were most often correlated with avoiding rearrest were 1) being under sentence for a misdemeanor property offense; 2) Community Penalties; 3) and being ordered to pay a fine, court costs, or restitution as a condition of sentence or release.

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Introduction

Legislative Mandate

The General Assembly requires the North Carolina Sentencing and Policy Advisory Commission to examine recidivism among the state's community-based correctional programs. The first study, titled *Recidivism of Criminal Offenders Assigned to Community Correctional Programs or Released from Prison in North Carolina in 1989*, was conducted by Stevens Clarke and Anita Harrison at the University of North Carolina's Institute of Government (Clarke and Harrison 1992). It included information on offenders in various correctional programs during the calendar year 1989, and tracked the offenders for an average of 26 months to examine future criminal behavior, specifically fingerprinted arrests.

The time frame for the present study was fiscal year 1992-93, or July 1, 1992 through June 30, 1993. The General Assembly mandated that offenders be tracked for recidivism, and the legislation defined recidivism as rearrest within two years or more after assignment to a program or release from prison.¹

The term "recidivism" can be defined many ways, and any definition is problematic. For instance, the definition used in this study - fingerprinted rearrest

within two years or more - does not include the following: 1) crimes committed but not reported to law enforcement, 2) crimes reported to law enforcement which did not result in an arrest, 3) crimes committed in other states, unless the crime resulted in extradition from North Carolina to that state, 4) crimes other than those requiring fingerprinting,² and 5) crimes which should have been fingerprinted and reported to DCI by local law enforcement agencies but were not. Such a definition of recidivism also assumes that each fingerprinted arrestee is guilty of the offense with which he/she has been charged, which is not always true. Many arrests eventually result in acquittal, dismissal, or reduction of charges.

Despite these shortcomings, the working definition of recidivism is the most useful for a study of this kind, given the improved sophistication of information systems in criminal justice agencies. While the definition for the current study may result in isolated inaccuracies, it provides some overall indicators of recidivism among the programs examined.

Mandated Tasks

The General Assembly mandated the study include, but not be limited to, the following programs: prison releases, Community Penalties Program, Treatment

Alternatives to Street Crime (TASC), Community Service Work Program, regular probation, regular parole, intensive probation, intensive parole, electronic house arrest, and the Intensive Motivational Program of Alternative Correctional Treatment (IMPACT), or “boot camp” program.³

The tasks specified in the contract are listed below:

- 1) A description of the eligible population of each community corrections program;
- 2) A profile of offenders in each community corrections program and inmates released from prison;
- 3) A comparison of offender profiles between community corrections programs and inmates released from prison;
- 4) A determination of recidivism rates (rearrest) for each community corrections program and for inmates released from prison; and,
- 5) A comparison of recidivism rates between each community corrections program, combinations of community corrections programs, inmates released from prison, and inmates paroled from prison.

Notable Points Not Addressed in the Study

The current study is not an exhaustive evaluation of the programs under examination. As with any research, a number of methodological limitations should be taken into account before making any policy assessments based on our findings. In order for an evaluation to be properly conducted, the researcher should be able to establish a pure laboratory setting. Establishing a pure laboratory setting in an applied, “real world” study like corrections is virtually impossible.

For example, we had no control over who entered the programs being studied. During the course of gathering data, some practitioners in these programs pointed out that the recidivism figures may not present an accurate portrayal of their program’s effectiveness. One reason is that they may be getting a more high-risk clientele than other programs. Though this situation can be controlled somewhat through the use of multivariate statistics, the consumer of any applied research should bear that caveat in mind. Judicial officials control the selection process, not the researcher. Since judicial officials are sworn to serve the public or their clientele, rather than researchers, this is understandable. But, when evaluating a group of programs, the assumption of randomly selected inclusion into a program cannot be attained.⁴

Another issue which cannot be addressed relates to quality of supervision within the programs. We cannot control for the possibility that some program practitioners may provide more effective supervision than others. An offender's performance may be more reflective of an individual supervisor or caseworker's efforts than the program in which he/she participated.

With regard to community service and monetary conditions of a sentence, we only knew how many hours the offender was ordered to perform, or how much money the offender was ordered to pay. Successful completion is determined by performing all required hours and paying a community service fee. We did not know how many hours were performed, or how much money the individual actually paid.

This study only included formally adjudicated offenders. This point is particularly noteworthy with reference to programs that service pre-trial or non-adjudicated offenders, such as community service and TASC. We could not assess TASC's impact on offenders who had not been formally adjudicated. The fact that pre-trial individuals constitute a significant portion of TASC's target group should be taken into account when reading any assessment of that program.

Traffic offenders, individuals under sentence for driving while impaired, and unsupervised probationers were not included in this study. Involving this group

would have taken an inordinate amount of time, effort and resources. Plus, those offenses, with the possible exception of drunk driving, are not of paramount public concern compared to other forms of crime. A similar precaution should be made with respect to community service work. Since many of the offenders assigned to perform community service have been convicted of drunk driving, it is impossible to draw definitive conclusions about community service.

Arrests for technical violations of probation or parole (such as failure to report or abide by court-imposed financial conditions) were not recorded. However, a probation or parole revocation for technical reasons, prompted by a new arrest, was included, provided the arrest was submitted to DCI. Unsupervised probationers were not included in the study.

This study cannot address the impact of North Carolina's Structured Sentencing legislation, as the time frame (July 1, 1992 - June 30, 1993) predates Structured Sentencing's implementation. Subsequent study is needed to evaluate the impact of Structured Sentencing on these community corrections programs.

Data Sources

The data for this study were obtained from several sources, in accordance with the terms of the Sentencing Commission contract. The information used was machine-readable data supplied by the agencies administering the programs, with one exception. No information on community service participants was supplied by the Department of Crime Control and Public Safety.

Information on various probation programs, parole and other released prisoners was supplied by the Research and Planning Section of the Department of Correction. Information on TASC and Community Penalties participants was submitted by the respective field offices, and matched with Department of Correction records. From these records we extracted all cases which fell within the proper time frame (fiscal year 1992-93), as well as those whose offenses fit the desired categories.

We began with nine data files totaling approximately 450 megabytes, and reduced the data to an 11.2 megabyte file containing 33,111 cases. These 33,111 cases were supplied to the State Bureau of Investigation's Division of Criminal Information (DCI). The DCI was given the following information: 1) name, 2) Department of Correction (DOC) number, 3) date of birth, 4) race, 5) gender, 6)

social security number, 7) and FBI number, if available. The DCI checked for “hits”, or fingerprinted arrests on all the individuals included, and sent the hits to us. As noted earlier, no information database system is perfect, and there will be isolated inaccuracies. But the method being used is among the most credible measures available for measuring trends or indicators related to criminal activity and criminal history.

The DCI supplied information on the offenders’ criminal histories, that is, fingerprinted arrests *before* the start of probation or release from prison for the 1992-93 fiscal year. The DCI also supplied arrest information after the start of probation or release from prison. The entire group of 33,111 offenders was tracked through the early portion of 1996, approximately a 36.7 month tracking period, depending upon when the offender began probation or was released from incarceration.

The follow-up period for many offenders may have gone beyond program completion. For example, if an offender was placed on probation during fiscal year 1992-93, and was terminated from probation during fiscal year 1992-93, the follow-up period went beyond the probationer’s termination date.

This highlights an important point. The offenders were being examined for their performance *during* their participation in a correctional program. But some were

examined for their performance *after* having left the program, *when the program officials had no control or jurisdiction over the offender's actions*. Subsequent study should address what an offender did *while being supervised* in a program versus what he/she did *after* leaving the program.

Measurement and Description of Variables

The consumer of any research should be mindful that no study can possibly include all of the variables which might account for an individual's behavior. One variable which may strongly relate to recidivism, which we could not accurately measure, was income. If being poor was associated with recidivism, we would not know it based on this study. We could not identify individuals who lived in certain communities or neighborhoods which tend to be high crime areas. We could not identify individuals living in areas where local law enforcement was more aggressive than other jurisdictions. It has been suggested that certain physical or biological factors, such as attractiveness, genetics, or nutritional habits may be related to criminal behavior. While one may speculate about the relationship these factors have to crime, we could not investigate these possibilities given the nature of the data.

This is one point we cannot over-emphasize. There may have been more factors at work with respect to recidivism than are included in this study. This should be kept in mind when assessing the impact of any correctional program.

The variables used were chosen from those provided by the Department of Correction. Based on our knowledge of prior social science research, we decided to include the following variables: 1) age (at the time he/she entered the NCDOC system), 2) race,⁵ 3) gender, 4) marital status, 5) number of prior fingerprinted arrests,⁶ 6) current offense category,⁷ 7) county of conviction,⁸ 8) whether the individual had any financial obligations imposed as a condition of sentence or release, 9) correctional programs in which he/she had participated, and 10) whether the individual pled guilty or was convicted through bench or jury trial.

In cases where an offender was under sentence for more than one offense, or was being supervised on more than one case, we selected the offense carrying the longest sentence, i.e., the most serious offense.

Explanation of Statistical Techniques

Descriptives

Frequencies and means were used to profile the clientele in the various programs, and develop a preliminary assessment of the performances (in terms of rearrests) of the program participants. These simple, “univariate”, descriptive statistics do not necessarily provide accurate indicators of characteristics which, 1) distinguish program participants, or 2) identify characteristics associated with recidivism.

Our objective was to examine which independent variables (such as age, race, or marital status) were correlated with a dependent variable, or outcome (whether a person was re-arrested). As mentioned previously, some concern was voiced by program practitioners that a certain program might be unfairly tied to high recidivism simply because they serve a higher risk clientele. For example, if we were to compare the performances of a group of released inmates from the Federal prison at Marion, Illinois, with that of first-time offenders from an upscale neighborhood in Research Triangle Park, who performed community service for a drunk driving offense, the inmates from Marion would probably recidivate more often, and commit more serious offenses than the group from RTP.

Obviously one would not conclude that inmates from Marion would stand less chance of committing crimes had they been ordered to perform community service rather than be sent to prison. The most likely explanation would be that *individual*, rather than *program* differences, were driving this dissimilarity. Likewise, simply looking at a program's recidivism statistics may not provide an accurate measure of a program's impact.

Examination of Individual Programs and Participants⁹

This section contains descriptive information on the various programs and their participants in narrative and tabular form. We also compared the descriptive profiles with those included in Clarke and Harrison's (1992) first recidivism study. In the process of developing these profiles, we noticed some changes in the program participants between 1989 and 1992-93.

Fines, Restitution, Court Costs: Fines are the most commonly administered criminal sanction in the American justice system. Fines may be imposed as a stand-alone punishment; but in this study, all offenders were assessed a fine as a condition of probation or release from incarceration.

Restitution is money paid by the offender and disbursed to the victim of a crime. Restitution is usually a condition of probation, but in some cases it is a condition of release on parole.

Court costs are estimated expenditures encumbered by the local court system in the processing and adjudication of a case. It is frequently a condition of probation. The amount of court costs was included in the DOC data set.

We combined these three variables, fine, restitution, and court costs, into one variable, called “monetary conditions”. We dichotomized it into a yes or no category, “yes” meaning there was a financial penalty attached to the sentence, “no” meaning there was not.¹⁰ 17,482 (53%) of the 33,111 cases had a monetary condition.¹¹ None of the parole and terminate population, nor the prison maxouts were included in this group. Descriptive information on the monetary group is listed in Table 1 on page 14.

Clarke and Harrison (1992) examined the impact of court-ordered restitution on recidivism, while we incorporated court costs, fines, and restitution. So a comparison between our monetary group and Clarke and Harrison’s restitution group was not possible.

Table 1: Offenders with Court Costs/Fines/Restitution N=17,088

Age (mean):	28.9	Sentencing County Size:	
standard deviation	10.2	Rural/Other State.....	41.8%
		Suburban.....	58.2%
Gender:		Guilty Plea:	
Male.....	74.0%	Plea or no contest.....	95.6%
Female.....	26.0%	Convicted:.....	4.4%
Ethnicity:		Participation in other programs:	
White.....	46.8%	Community Penalties	1.2%
African-American.....	49.7%	Community Service	36.9%
Other ¹²	3.5%	Electronic House Arrest-Probation ..	2.0%
		Electronic House Arrest-Parole	0.1%
Marital Status:		IMPACT	0.4%
Single.....	60.3%	Intensive Parole	0.5%
Divorced/Separated:.....	19.4%	Intensive Probation	5.8%
Married/Widowed:.....	20.2%	Regular Parole	7.2%
		Regular Probation	93.1%
		Special Probation	5.4%
		TASC	2.0%
Mean number of prior arrests:		Current Offense:	
Any offense.....	2.13	Violent felony.....	4.4%
Violent offense.....	.19	Sex felony.....	2.0%
Sex offense (felony).....	.05	Property felony.....	12.8%
Property offense.....	.98	Drug felony.....	17.1%
Drug offense.....	.54	Other felony.....	1.0%
Other offense.....	.13	Violent misdemeanor.....	10.3%
		Property misdemeanor.....	31.1%
		Drug misdemeanor.....	7.5%
		Other misdemeanor.....	13.8%
Mean number of subsequent arrests.....	.62	Participants who had at least one subsequent arrest:	
		Any offense.....	21.2%
		Violent offense.....	4.7%
		Sex offense (felony).....	3.5%
		Property offense.....	14.2%
		Drug offense.....	7.7%
		Other offense.....	3.4%

Regular probation: Most individuals under sentence for a criminal conviction in the United States are under this form of supervision. Regular probationers constituted the largest single group in this study (N=18,966). Regular probation provides basic community supervision to offenders receiving a suspended sentence from a court. The degree to which regular probationers are supervised varies from once every fifteen days to a collateral contact every ninety days. Most are supervised at a restriction level somewhere between those two extremes. Descriptive information on the regular probation group is listed in Table 2 on page 16. Clarke and Harrison subdivided the regular probation group into different categories, so any comparison would be problematic.

Intensive supervision probation (ISP): A sanction rekindled in the 1980's in reaction to prison crowding, intensive probation is, in simple terms, very strict probation. Curfews, mandatory drug and alcohol testing, and a minimum of 72 hours community service are often components of intensive probation in North Carolina. The North Carolina ISP model consists of two phases. During phase I, which usually lasts at least three months, offenders begin by having five contacts per week with their officer, and complete 40 hours of community service. Restrictions and requirements are relaxed if the probationer progresses to the satisfaction of probation officials. During phase II, probationers are required to have three weekly

Table 2: Regular Probation N=18,966

Age (mean):	28.7	Sentencing County Size:	
standard deviation	10.12	Rural/Other State.....	40.9%
		Suburban.....	59.1%
Gender:		Guilty Plea:	
Male.....	74.3%	Plea or no contest.....	95.7%
Female.....	25.7%	Convicted:.....	4.3%
		Participation in other programs:...	
Ethnicity:		Community Penalties	1.2%
White.....	47.5%	Community Service	32.2%
African-American.....	49.0%	Electronic House Arrest-Probation ..	3.2%
Other.....	3.4%	IMPACT	1.3%
		Intensive Probation	6.5%
Marital Status:		Monetary Conditions	83.9%
Single.....	61.4%	Regular Parole	8.0%
Divorced/Separated:.....	18.9%	Special Probation	7.0%
Married/Widowed:.....	19.7%	TASC	2.1%
		Current Offense:	
Mean number of prior arrests:		Violent felony.....	3.9%
Any offense.....	2.30	Sex felony.....	2.1%
Violent offense.....	.19	Property felony.....	14.1%
Sex offense (felony).....	.05	Drug felony.....	16.2%
Property offense.....	1.08	Other felony.....	1.0%
Drug offense.....	.54	Violent misdemeanor.....	10.4%
Other offense.....	.14	Property misdemeanor.....	30.5%
		Drug misdemeanor.....	7.4%
		Other misdemeanor.....	14.3%
Mean number of subsequent arrests.....	.69	Participants who had at least one subsequent arrest:	
		Any offense.....	22.8%
		Violent offense.....	5.2%
		Sex offense (felony).....	4.4%
		Property offense.....	14.8%
		Drug offense.....	8.4%
		Other offense.....	4.0%

contacts with their supervising officer, and complete 32 hours of community service. If the offender successfully completes intensive supervision, he/she is usually moved to regular probation. Descriptive information on the Intensive Probation group is listed in Table 3 on page 18.

This program was being used more frequently in 1992-93 than in 1989. Our study included more participants, 2,088 versus 946 for Clarke and Harrison. Our intensive probation group included a substantially larger number of African-Americans (62% to 50%), as well as a slightly larger percentage of single people (74% to 65%). The group in the current study included more recidivists than the Clarke and Harrison group, but the Clarke and Harrison group had an average of 3.2 prior arrests, whereas the present group had an average of 5.6 prior arrests.

Electronic house arrest-probation: This sanction is usually a special condition of probation or parole, though some jurisdictions use it as a condition of pretrial release. Usually, offenders are restricted to their homes with the exception of certain pre-approved activities, such as work, school, or substance abuse counseling. Computer technology is used to monitor the offender's whereabouts. Most electronic devices are attached to the offender's ankle or wrist, and notify a central computer if the offender goes beyond an authorized radius. Some electronic house arrest systems make random phone calls to the offender's home. The system

Table 3: Intensive Probation N=2088

Age (mean):	26.0	Sentencing County Size:	
standard deviation.....	8.0	Rural/Other State.....	39.7%
		Suburban.....	60.3%
Gender:		Guilty Plea:	
Male.....	89.6%	Plea or no contest.....	97.9%
Female.....	10.4%	Convicted:.....	2.1%
Ethnicity:		Participation in other programs:...	
White.....	35.6%	Community Penalties.....	4.7%
African-American.....	61.6%	Community service ¹³	24.8%
Other.....	2.7%	Electronic House Arrest-Probation... IMPACT.....	53.6% 5.0%
Marital Status:		Monetary Conditions.....	56.6%
Single.....	73.5%	Special Probation.....	12.7%
Divorced/Separated:.....	13.7%	TASC.....	2.7%
Married/Widowed:.....	12.8%		
Mean number of prior arrests:		Current Offense:	
Any offense.....	5.60	Violent felony.....	11.0%
Violent offense.....	.44	Sex felony.....	2.2%
Sex offense (felony).....	.07	Property felony.....	39.6%
Property offense.....	3.14	Drug felony.....	26.4%
Drug offense.....	1.08	Other felony.....	1.6%
Other offense.....	.31	Violent misdemeanor.....	3.1%
		Property misdemeanor.....	10.5%
		Drug misdemeanor.....	1.8%
		Other misdemeanor.....	3.7%
Mean number of subsequent arrests:	2.02	Participants who had at least one subsequent arrest:	
		Any offense.....	61.2%
		Violent offense.....	15.1%
		Sex offense (felony).....	6.2%
		Property offense.....	38.4%
		Drug offense.....	26.0%
		Other offense.....	13.3%

employs either voice verification or the entering of a code to insure the offender is at home. EHA-Probation usually lasts ninety days. Descriptive information on probationers who were subjected to electronic house arrest is listed in Table 4 on page 20.

There was a great deal of overlap between electronic house arrest-probation and intensive probation, as many offenders participate in them either simultaneously or as a follow-up component. So, electronic house arrest-probation included a high recidivism percentage, 66.9% for any offense, versus 33.4% from Clarke and Harrison's study. But, as with intensive probation, the electronic house arrest-probation group is serving a higher risk clientele than it was in 1989. Clarke and Harrison reported that the average number of prior arrests for the 1989 group was 2.8, whereas the 1992-93 group had an average of 6.5 prior arrests. The 1992-93 group included a larger number of single individuals (73% to 67% for Clarke and Harrison) and more African-Americans (65% versus 57%).

The Intensive Motivational Program of Alternative Correctional Treatment (IMPACT): Commonly referred to as boot camp or shock incarceration, this program requires the offender to spend ninety days in a correctional institution where he is subjected to a strictly regimented military-type program. The IMPACT program targets males aged 16-25, and who have never served more than 120 days

Table 4: Electronic House Arrest Probation N=1254

Age (mean):	26.3	Sentencing County Size:	
standard deviation.....	7.6	Rural/Other State.....	39.2%
		Suburban.....	60.8%
Gender:		Guilty Plea:	
Male.....	90.9%	Plea or no contest.....	97.6%
Female.....	9.1%	Convicted:.....	2.4%
Ethnicity:		Participation in other programs:...	
White.....	32.7%	Community Penalties.....	2.0%
African-American.....	64.7%	Community Service.....	11.8%
Other.....	2.6%	IMPACT.....	.5%
		Intensive Probation.....	89.3%
Marital Status:		Monetary Conditions.....	26.6%
Single.....	72.6%	Special Probation.....	2.2%
Divorced/Separated:.....	13.9%	TASC.....	.3%
Married/Widowed:.....	13.5%		
Mean number of prior arrests:		Current Offense:	
Any offense.....	6.5	Violent felony.....	12.4%
Violent offense.....	.53	Sex felony.....	2.1%
Sex offense (felony).....	.07	Property felony.....	44.2%
Property offense.....	3.70	Drug felony.....	23.6%
Drug offense.....	1.11	Other felony.....	2.0%
Other offense.....	.36	Violent misdemeanor.....	3.4%
		Property misdemeanor.....	8.1%
		Drug misdemeanor.....	1.2%
		Other misdemeanor.....	3.0%
Mean number of subsequent arrests:	2.66	Participants who had at least one subsequent arrest:	
		Any offense.....	66.9%
		Violent offense.....	16.9%
		Sex offense (felony).....	5.7%
		Property offense.....	42.9%
		Drug offense.....	28.6%
		Other offense.....	14.3%

in an adult correctional facility. IMPACT and Special Probation, which is discussed next, are unique in that participants were forcibly restrained from recidivating for part of the time the program was in effect (Clarke and Harrison 1992).

IMPACT was not included in the Clarke and Harrison study, as the program was just beginning in 1989. Descriptive information on the IMPACT group is listed in Table 5 on page 22.

Compared to other programs, IMPACT served a much younger clientele, as the program targets young males. The average number of prior arrests for IMPACT participants was lower than that of the other probation groups. Approximately 51% of the IMPACT group was rearrested during the follow-up period, despite the fact that most of this group was incarcerated for at least 90 days during the time period examined.

Special probation: Sometimes referred to as a “split sentence”, special probation involves a maximum jail or prison stay of six months, before an offender is released on probation. Some individuals spend their confinement time on weekends. As Clarke and Harrison stated in the first recidivism study, special probation is unlike other programs examined, except IMPACT, in that the offender was usually physically prohibited from recidivating for part of the study time frame.

Table 5: IMPACT N=340

Age (mean):	19.8	Sentencing County Size:	
standard deviation.....	2.1	Rural/Other State.....	45.9%
		Suburban.....	54.1%
Gender:		Guilty Plea:	
Male.....	100%	Plea or no contest.....	98.5%
		Convicted:.....	1.5%
Ethnicity:		Participation in other programs:...	
White.....	50.0%	Community Penalties.....	5.0%
African-American.....	47.4%	Community Service.....	9.4%
Other.....	2.6%	Electronic House Arrest-Probation...	1.8%
		Intensive Probation.....	30.9%
Marital Status:		Monetary Conditions.....	19.7%
Single.....	95.2%	Special Probation.....	6.2%
Divorced/Separated:.....	.9%	TASC.....	3.8%
Married/Widowed:.....	3.9%		
Mean number of prior arrests :		Current Offense:	
Any offense.....	3.3	Violent felony.....	7.4%
Violent offense.....	.19	Sex felony.....	.6%
Sex offense (felony).....	.02	Property felony.....	41.8%
Property offense.....	2.16	Drug felony.....	20.9%
Drug offense.....	.53	Other felony.....	.6%
Other offense.....	.17	Violent misdemeanor.....	5.3%
		Property misdemeanor.....	15.3%
		Drug misdemeanor.....	.6%
		Other misdemeanor.....	7.6%
Mean number of subsequent arrests:	1.92	Participants who had at least one subsequent arrest:	
		Any offense.....	51.6%
		Violent offense.....	12.9%
		Sex offense (felony).....	2.1%
		Property offense.....	29.1%
		Drug offense.....	17.4%
		Other offense.....	12.1%

Descriptive information on the Special Probation group is listed in Table 6 on page 24.

40% of the current group was subsequently rearrested, versus 33% of the Clarke and Harrison group of 1989. However, as with other programs (which overlap with this one to some degree), special probation served a more high-risk clientele. The average number of prior arrests from Clarke and Harrison's special probation group was 2.5, as opposed to 4.9 for the 1992-93 group.

Community service work program: Some jurisdictions refer to this sanction as "symbolic restitution" because offenders are expected to compensate the community for the harm done by their crime. Offenders are required to perform free work for public or nonprofit agencies, and pay a \$100 fee to the clerk of court.

As mentioned earlier, we had access to the number of hours the offenders were ordered to perform, but we did not know how many hours had been completed, nor did we have information as to the type of placements in which the work was performed. To be classified a "success", all community service hours must be completed. Also, as mentioned before, community service includes a substantial number of driving while impaired offenders, a large number of unsupervised probationers, and some pretrial defendants. Neither of these two populations was

Table 6: Special Probation N=2105

Age (mean):	29.2	Sentencing County Size:	
standard deviation.....	9.0	Rural/Other State.....	41.4%
		Suburban.....	58.6%
Gender:		Guilty Plea:	
Male.....	87.7%	Plea or no contest.....	95.8%
Female.....	12.3%	Convicted:.....	4.2%
		Participation in other programs:...	
Ethnicity:		Community Penalties.....	3.1%
White.....	33.4%	Community service.....	15.2%
African-American.....	63.2%	Electronic House Arrest-Probation...	1.3%
Other.....	3.4%	IMPACT.....	1.0%
		Intensive Probation.....	17.1%
Marital Status:		Monetary Conditions.....	44.1%
Single.....	66.2%	Regular Probation.....	63.5%
Divorced/Separated:.....	18.7%	TASC.....	2.8%
Married/Widowed:.....	15.1%		
		Current Offense:	
Mean number of prior arrests:		Violent felony.....	10.3%
Any offense.....	4.9	Sex felony.....	4.0%
Violent offense.....	.46	Property felony.....	29.0%
Sex offense (felony).....	.10	Drug felony.....	29.6%
Property offense.....	2.28	Other felony.....	1.0%
Drug offense.....	1.11	Violent misdemeanor.....	7.0%
Other offense.....	.27	Property misdemeanor.....	11.7%
		Drug misdemeanor.....	2.5%
		Other misdemeanor.....	4.8%
Mean number of subsequent arrests:	1.44	Participants who had at least one subsequent arrest:	
		Any offense.....	40.0%
		Violent offense.....	12.0%
		Sex offense (felony).....	4.2%
		Property offense.....	22.7%
		Drug offense.....	16.4%
		Other offense.....	8.1%

included in the study. Descriptive information on the community service group is included in Table 7 on page 26.

We categorized the participants differently than Clarke and Harrison. Clarke and Harrison divided community service participants into parole and probation categories. We combined them, and accounted for their participation in other programs, including probation and parole, in the logistic regression.

Treatment Alternatives to Street Crime (TASC): The primary target group for TASC is drug dependent offenders. TASC programs work with both pre and post adjudicated individuals. TASC is funded by the Division of Mental Health, Developmental Disabilities and Substance Abuse Services in the Department of Human Resources, and administered by area mental health programs. TASC coordinators initially screen offenders for substance abuse, then link them to appropriate treatment resources, and monitor treatment progress. Approximately one-third of TASC clients are in pretrial status.¹⁴ TASC is not available statewide.

TASC coordinators are in frequent contact with treatment specialists, and periodic progress reports are submitted to the client's probation officer by TASC officials. TASC clients are required to have at least one monthly contact with their caseworker. Periodic urinalysis screening is required. The program typically lasts four to six months. The data does not indicate whether an individual stayed in

Table 7: Community Service N=7,302

Age (mean):	27.7	Sentencing County Size:	
standard deviation	9.8	Rural/Other State.....	40.2%
		Suburban.....	59.8%
Gender:		Guilty Plea:	
Male.....	74.9%	Plea or no contest.....	96.4%
Female.....	25.1%	Convicted:.....	3.6%
Ethnicity:		Participation in other programs:	
White.....	48.2%	Community Penalties	1.4%
African-American.....	48.4%	Electronic House Arrest-Parole	0.2%
Other.....	3.4%	Electronic House Arrest-Probation ..	2.0%
		IMPACT	0.4%
Marital Status:		Intensive Parole	1.0%
Single.....	66.5%	Intensive Probation	8.1%
Divorced/Separated:.....	15.9%	Monetary Conditions	86.4%
Married/Widowed:.....	17.6%	Regular Parole	17.5%
		Regular Probation	83.7%
		Special Probation	4.4%
		TASC	1.7%
Mean number of prior arrests:		Current Offense:	
Any offense.....	2.5	Violent felony.....	7.0%
Violent offense.....	.24	Sex felony.....	1.8%
Sex offense (felony).....	.04	Property felony.....	15.8%
Property offense.....	1.16	Drug felony.....	20.4%
Drug offense.....	.65	Other felony.....	1.1%
Other offense.....	.14	Violent misdemeanor.....	5.5%
		Property misdemeanor.....	31.8%
		Drug misdemeanor.....	6.7%
		Other misdemeanor.....	9.8%
Mean number of subsequent arrests.....	.71	Participants who had at least one subsequent arrest:	
		Any offense.....	22.7%
		Violent offense.....	4.9%
		Sex offense (felony).....	4.8%
		Property offense.....	14.4%
		Drug offense.....	8.8%
		Other offense.....	4.4%

TASC beyond the initial intake interview. The decision to notify probation or parole authorities in such instances is made on a case by case basis. Descriptive information on the TASC group is included in Table 8 on page 28.

More TASC participants from the 1992-93 group were rearrested than from Clarke and Harrison's, 35% versus 27%. But as with most programs, TASC may have served a more high risk clientele in 1992-93 than in 1989. The average number of prior arrests among the 1989 group was 1.9 for any offense, versus 3.9 for the 1992-93 group.

Community Penalties (COMPEN): This program is administered by the Administrative Office of the Courts (AOC). It targets convicted misdemeanants and felons who are eligible for a non-prison punishment and who are facing an imminent and substantial threat of imprisonment. COMPEN officials prepare detailed community penalty plans for presentation to the sentencing judge by the defendant's attorney, or at the request of the sentencing judge.

COMPEN is unique with respect to the other programs in that it is not a post-adjudicatory program. COMPEN also contracts and arranges services with public or private agencies, and monitors offender compliance with the recommended course of treatment. COMPEN plans often involve some combination of programs including intensive supervision, community service, and substance abuse treatment.

Table 8: TASC N= 563

Age (mean):	29.6	Sentencing County Size:	
standard deviation	9.3	Rural/Other State.....	20.1%
		Suburban.....	79.9%
Gender:		Guilty Plea:	
Male.....	79.9%	Plea or no contest.....	98.4%
Female.....	20.1%	Convicted:.....	1.6%
Ethnicity:		Participation in other programs:...	
White.....	42.6%	Community Penalties.....	5.3%
African-American.....	55.6%	Community Service.....	22.4%
Other.....	1.8%	Electronic House Arrest-Probation...	0.7%
		IMPACT.....	2.3%
Marital Status:		Intensive Parole.....	0.7%
Single.....	62.7%	Intensive Probation.....	13.0%
Divorced/Separated:.....	18.6%	Monetary Conditions.....	62.5%
Married/Widowed:.....	17.7%	Regular Parole.....	25.6%
		Regular Probation	78.7%
		Special Probation.....	10.5%
Mean number of prior arrests:		Current Offense:	
Any offense.....	3.9	Violent felony.....	5.9%
Violent offense.....	.29	Sex felony.....	2.7%
Sex offense (felony).....	.06	Property felony.....	17.8%
Property offense.....	1.65	Drug felony.....	33.9%
Drug offense.....	1.18	Other felony.....	1.4%
Other offense.....	.23	Violent misdemeanor.....	6.6%
		Property misdemeanor.....	10.7%
		Drug misdemeanor.....	16.5%
		Other misdemeanor.....	4.6%
Mean number of subsequent arrests: .....	.97	Participants who had at least one subsequent arrest:	
		Any offense.....	34.8%
		Violent offense.....	6.9%
		Sex offense (felony).....	4.3%
		Property offense.....	21.1%
		Drug offense.....	17.1%
		Other offense.....	5.9%

Descriptive information on the Community Penalties group is listed in Table 9 on page 30.

Compared to Clarke and Harrison's group, the percentage of COMPEN participants who were rearrested was slightly less. 34.1% of the current group was rearrested, versus 35.5% from the 1989 group. This occurred despite the fact that the present COMPEN group had a much higher mean number of prior arrests than Clarke and Harrison's, 5.12 versus 3.2.

Intensive parole:¹⁵ Parole is a conditional early discharge from prison. Parolees are subject to conditions imposed by the Parole Commission, and enforced by a Parole Officer. Intensive parole is similar to intensive probation in that it requires more frequent reporting and closer scrutiny than regular parole. Descriptive information on the Intensive Parole group is included in Table 10 on page 31.

As with some of the other programs, the 1992-93 group included more African-Americans than Clarke and Harrison's, 67% to 53%. The present study included fewer violent felons than Clarke and Harrison's, 31%, plus 13% felonious sex offenders, versus 61% violent felons from the Clarke and Harrison study. Like the other groups, intensive parolees in the 1992-93 group had a higher average number of prior arrests (4.7 to 3.0), and a higher number of recidivists (50% versus 33%)

Table 9: Community Penalties Participants N= 252

Age (mean):	28.1	Sentencing County Size:	
standard deviation.....	9.9	Rural/Other State.....	23.4%
		Suburban.....	76.6%
Gender:		Guilty Plea:	
Male.....	77%	Plea or no contest.....	98.4%
Female.....	23%	Convicted:.....	1.6%
Ethnicity:		Participation in other programs:...	
White.....	53.6%	Community service ¹⁶	42.5%
African-American.....	42.5%	EHA Probation.....	10.7%
Other.....	4.0%	IMPACT.....	7.1%
		Intensive Probation.....	42.1%
Marital Status:		Monetary Conditions.....	79.8%
Single.....	60.0%	Regular Parole.....	13.1%
Divorced/Separated:.....	16.4%	Regular Probation.....	95.6%
Married/Widowed:.....	23.6%	Special Probation.....	26.2%
		TASC.....	11.9%
Mean number of prior arrests:		Current Offense:	
Any offense.....	5.12	Violent felony.....	6.0%
Violent offense.....	.25	Sex felony.....	4.0%
Sex offense (felony).....	.09	Property felony.....	41.3%
Property offense.....	2.72	Drug felony.....	32.5%
Drug offense.....	1.29	Other felony.....	2.8%
Other offense.....	.25	Violent misdemeanor.....	0.4%
		Property misdemeanor.....	7.5%
		Drug misdemeanor.....	3.2%
		Other misdemeanor.....	2.4%
Mean number of subsequent arrests:	1.18	Participants who had at least one subsequent arrest:	
		Any offense.....	34.1%
		Violent offense.....	6.7%
		Sex offense (felony).....	4.8%
		Property offense.....	26.2%
		Drug offense.....	11.9%
		Other offense.....	5.6%

Table 10: Intensive Parole N=136

Age (mean):	30.9	Sentencing County Size:	
standard deviation.....	10.8	Rural/Other State.....	39.7%
		Suburban.....	60.3%
Gender:		Guilty Plea:	
Male.....	96.3%	Plea or no contest.....	90.4%
Female.....	3.7%	Convicted:.....	9.6%
		Participation in other programs:...	
Ethnicity:		Community service.....	53.7%
White.....	26.5%	Electronic house arrest-Parole.....	2.2%
African-American.....	66.9%	Monetary Conditions.....	58.8%
Other.....	6.6%	Regular Parole.....	99.3%
		Regular Probation.....	5.1%
Marital Status:		TASC.....	2.9%
Single.....	65.4%		
Divorced/Separated:.....	19.5%		
Married/Widowed:.....	15.0%		
		Current Offense:	
Mean number of prior arrests:		Violent felony.....	34.6%
Any offense.....	4.7	Sex felony.....	13.2%
Violent offense.....	.93	Property felony.....	27.9%
Sex offense (felony).....	.16	Drug felony.....	16.2%
Property offense.....	2.28	Other felony.....	3.7%
Drug offense.....	.40	Violent misdemeanor.....	1.5%
Other offense.....	.25	Property misdemeanor.....	1.5%
		Drug misdemeanor.....	0.7%
		Other misdemeanor.....	0.7%
Mean number of subsequent arrests:	1.77	Participants who had at least one subsequent arrest:	
		Any offense.....	50.0%
		Violent offense.....	15.4%
		Sex offense (felony).....	11.8%
		Property offense.....	32.4%
		Drug offense.....	22.1%
		Other offense.....	11.0%

than the Clarke and Harrison group.

Electronic house arrest-parole: This is similar to the electronic house arrest program for probationers except it involves parolees. This group contained the smallest number of offenders. Descriptive information on the Electronic House Arrest-Parole group is listed in Table 11 on page 33. This group was not included in the Clarke and Harrison study.

Regular parole: We defined regular parole as parole not involving intensive supervision or electronic monitoring. Regular parole often involves mandatory community service. Descriptive information on this population is listed in Table 12 on page 34.

The 1992-93 group included a much larger number of regular parolees than the Clarke and Harrison study (10,289 to 6,514). The current study includes more African-Americans (64.9% to 59%), and more single people (66.5% versus 59.9%). The 1992-93 group of parolees had more average prior arrests than the Clarke and Harrison group (6.5 to 3.8), and the percentage of recidivists was higher for this study (48.4% to 41.3%).

Parole and terminate: This group, along with the prison “maxouts”, did not participate in any of the community corrections programs mentioned in the study.

Table 11: Electronic House Arrest-Parole N=73

Age (mean):	26.7	Sentencing County Size:	
standard deviation.....	7.1	Rural/Other State.....	41.1%
		Suburban.....	58.9%
Gender:		Guilty Plea:	
Male.....	93.2%	Plea or no contest.....	97.2%
Female.....	6.8%	Convicted:.....	2.8%
Ethnicity:		Participation in other programs:...	
White.....	26.0%	Community Service.....	20.5%
African-American.....	68.5%	Intensive Parole.....	4.1%
Other.....	5.5%	Monetary Conditions.....	13.7%
		Regular Probation.....	1.4%
Marital Status:			
Single.....	72.6%		
Divorced/Separated:.....	11.0%		
Married/Widowed:.....	16.4%		
Mean number of prior arrests:		Current Offense:	
Any offense.....	6.7	Violent felony.....	19.2%
Violent offense.....	.53	Property felony.....	52.4%
Sex offense (felony).....	.03	Drug felony.....	24.7%
Property offense.....	3.69	Other felony.....	2.7%
Drug offense.....	1.33	Violent misdemeanor.....	1.4%
Other offense.....	.32		
Mean number of subsequent arrests:	2.71	Participants who had at least one subsequent arrest:	
		Any offense.....	65.8%
		Violent offense.....	15.1%
		Sexual Felony	1.4%
		Property offense.....	39.7%
		Drug offense.....	31.5%
		Other offense.....	20.5%

Table 12: Regular Parole N=10,289

Age (mean):	29.8	Sentencing County Size:	
standard deviation	8.7	Rural/Other State.....	42.1%
		Suburban.....	57.9%
Gender:		Guilty Plea:	
Male.....	91.8%	Plea or no contest.....	97.0%
Female.....	8.2%	Convicted:.....	3.0%
Ethnicity:		Participation in other programs:	
White.....	32.0%	Community Service	12.4%
African-American.....	64.9%	Electronic House Arrest-Parole	0.7%
Other.....	3.1%	Electronic House Arrest-Probation ..	9.2%
		IMPACT	0.9%
Marital Status:		Intensive Parole	1.3%
Single.....	66.5%	Intensive Probation	12.6%
Divorced/Separated:.....	18.7%	Monetary Conditions	12.0%
Married/Widowed:.....	14.8%	Regular probation	14.8%
		Special Probation	8.5%
		TASC	1.3%
Participants who had a prior arrest:		Current Offense:	
Any offense.....	6.5	Violent felony.....	16.5%
Violent offense.....	.62	Sex felony.....	3.3%
Sex offense (felony).....	.09	Property felony.....	43.4%
Property offense.....	3.37	Drug felony.....	29.1%
Drug offense.....	1.25	Other felony.....	2.1%
Other offense.....	.35	Violent misdemeanor.....	2.1%
		Property misdemeanor.....	2.1%
		Drug misdemeanor.....	0.2%
		Other misdemeanor.....	1.2%
Mean number of subsequent arrests.....	1.7	Participants who had at least one subsequent arrest:	
		Any offense.....	45.9%
		Violent offense.....	13.5%
		Sex offense (felony).....	3.2%
		Property offense.....	26.4%
		Drug offense.....	18.3%
		Other offense.....	10.1%

Paroled and terminated offenders were released by the Parole Commission without parole supervision requirements. Descriptive information on the Parole and Terminate group is included in Table 13 on page 36.

The 1992-93 parole and terminate group included more females than the Clarke and Harrison group, 17.6% to 7.5%. As with several other programs already discussed, the parole and terminate group from 1992-93 group had a higher mean number of prior arrests (5.1 to 3.2) and a higher number of recidivists (46% to 39.8%) than the 1989 group.

Prison “maxouts”: These individuals were unconditionally released from prison after they had served their entire sentence, minus credit for good time, gain time or previous confinement. Prison “maxouts” are not subject to any conditions of community supervision. Descriptive information on the Prison Maxout group is listed in Table 14 on page 37.

The 1992-93 group had more average prior arrests than prison maxouts in the Clarke and Harrison study, 6.7 versus 2.5. The number of recidivists in the 1992-93 group was higher than that of the 1989 group, 43.3% to 27.5%.

Table 13: Parole and Terminate N=4205

Age (mean):	29.5	Sentencing County Size:	
standard deviation	8.1	Rural/Other State.....	42.3%
		Suburban.....	57.7%
Gender:		Guilty Plea:	
Male.....	82.4%	Plea or no contest.....	96.6%
Female.....	17.6%	Convicted:.....	3.4%
Ethnicity:		Current Offense:	
White.....	31.1%	Violent felony.....	5.5%
African-American.....	67.6%	Sex felony.....	1.0%
Other.....	1.3%	Property felony.....	22.9%
		Drug felony.....	14.8%
Marital Status:		Other felony.....	1.1%
Single.....	68.6%	Violent misdemeanor.....	9.2%
Divorced/Separated:.....	19.3%	Property misdemeanor.....	31.5%
Married/Widowed:.....	12.2%	Drug misdemeanor.....	5.4%
		Other misdemeanor.....	8.6%
Mean number of prior arrests:		Participants who had at least one subsequent arrest:	
Any offense.....	5.1	Any offense.....	46.0%
Violent offense.....	.48	Violent offense.....	13.5%
Sex offense (felony).....	.05	Sex offense (felony).....	1.9%
Property offense.....	2.70	Property offense.....	27.2%
Drug offense.....	.76	Drug offense.....	16.2%
Other offense.....	.32	Other offense.....	9.9%
Mean number of subsequent arrests	1.7		

Table 14: Prison Maxouts N=270

Age (mean):	30.9	Sentencing County Size:	
standard deviation.....	8.3	Rural/Other State.....	44.1%
		Suburban.....	55.9%
Gender:		Guilty Plea:	
Male.....	89.3%	Plea or no contest.....	94.5%
Female.....	10.7%	Convicted:.....	5.5%
Ethnicity:		Current Offense:	
White.....	33.0%	Violent felony.....	16.7%
African-American.....	64.1%	Sex felony.....	4.8%
Other.....	3.0%	Property felony.....	35.2%
		Drug felony.....	23.3%
Marital Status:		Other felony.....	1.9%
Single.....	60.8%	Violent misdemeanor.....	6.7%
Divorced/Separated:.....	20.8%	Property misdemeanor.....	9.6%
Married/Widowed:.....	18.5%	Other misdemeanor.....	1.9%
Mean number of prior arrests		Participants who had at least one	
Any offense.....	6.7	subsequent arrest:	
Violent offense.....	.94	Any offense.....	43.3%
Sex offense (felony).....	.09	Violent offense.....	18.1%
Property offense.....	3.19	Sex offense (felony).....	3.3%
Drug offense.....	1.10	Property offense.....	21.5%
Other offense.....	.42	Drug offense.....	14.8%
		Other offense.....	8.5%
Mean number of subsequent			
arrests:	1.48		

Program Overlap

Most of the offenders participated in more than one program. For instance, an offender could have participated in TASC, Community Penalties, IMPACT, regular probation, electronic house arrest, intensive probation, and community service, all on one sentence. Plus, the offender could have been ordered to pay a fine, court costs, or restitution as a condition of the sentence. We controlled for participation in other programs in the logistic regression models.

The Sample

A stratified random sample of 4,063 was used for the multivariate statistical analysis, making sure that each program or sentence condition was adequately represented. Offenders in small programs were oversampled to insure proper representation and to increase the power of the analysis.

During calendar year 1993, North Carolina housed approximately 21,086 prisoners in state correctional facilities. North Carolina housed an average daily local jail population of 6,512 during calendar year 1992, the most recent year for which data were available. There were 86,212 adults on probation during calendar

year 1993. There were 17, 284 adults on state parole in 1993 (Morgan et al. 1994; 1995). With these figures in mind, we can liberally estimate that there were approximately 130,000 individuals serviced by these correctional programs during the fiscal year 1992-93.¹⁷

Isaac and Michael (1981) provided an index for researchers who want an adequate sample size for a given population total. They stated that, if the researcher has a population of 100,000, and wants to be 95% confident that the results of any analysis will not be due to sampling error, then a sample of 384 should be selected, provided the sample is randomly (without bias) selected.

The point being made by this recitation of figures is that this study includes a more than adequate sample size to conduct a sophisticated, reliable multivariate analysis. While the caveats mentioned earlier about interpreting our results do apply, the results of this study were not tainted by an inadequate number of cases.

Using the Isaac and Michael scale and the number of participants in the data set as a population base, Table 15 on page 40 presents a breakdown of how the sample was selected for the logistic regression analysis to insure at least a 95% confidence level in the findings. Table 16 on page 42 includes descriptive information on the sample selected for the logistic regression analysis.¹⁸

Table 15: Sample Selection Method

Program/Condition	Number of Cases in Data Set	Minimum Number Needed	Actual N Included in Analysis
Monetary Condition.....	17,088	377	2260
Regular Probation.....	18,966	379	2948
Intensive Probation.....	2088	327	1106
EHA Probation.....	1254	297	330
IMPACT.....	340	181	266
Special Probation.....	2105	327	595
Community Service.....	7302	367	1258
TASC.....	563	234	311
Community Penalties.....	252	155	230
Intensive Parole.....	136	103	136
EHA Parole.....	73	63	73
Regular Parole.....	10,289	380	2517
Parole and Terminate.....	4205	354	421
Prison Maxouts.....	270	159	190

Logistic Regression: A Brief Overview

In order to develop a more accurate measure of what factors correlated with rearrest, we used a form of multivariate (more than one variable) analysis called logistic regression. Clarke and Harrison (1992; 17), stated that a regression model provides an estimation of “the association of each independent variable with the dependent variable apart from the contribution of any other variables.” Logistic regression allowed us to examine whether a particular program, or a personal

characteristic (such as age or gender) was a significant correlate of committing a new offense.

In many forms of research, the researcher separates variables into two groups, called “dependent” and “independent” variables. A dependent variable is the *outcome* one is attempting to predict, or the variable that is assumed to depend or be caused by another variable. An independent variable is presumed to *cause* or *determine* a dependent variable, or outcome (Babbie 1992; Hagan 1993). An independent variable in one study may become a dependent variable in another.

The independent variables in this study include the programs in which the offender participated, plus age, race, gender, prior number of arrests, etc. **The dependent variable which is of primary importance is found in the legislation mandating the study: A fingerprinted re-arrest within two years or more of being placed on probation or released from prison between July 1, 1992 and June 30, 1993.** Therefore, we tried to assess the impact of independent variables, such as age and type of correctional program, on the dependent variable, which is subsequent arrest.

We must mention again, that though independent variables may *appear* to cause or determine a certain outcome, such appearances may be misleading. The

Table 16: Sample in Logistic Regression Analysis N=4,282

Age (mean):	28.1	Sentencing County Size:	
standard deviation	9.3	Rural/Other State.....	39.3%
		Suburban.....	60.7%
Gender:		Guilty Plea:	
Male.....	83.8%	Plea or no contest.....	96.8%
Female.....	16.2%	Convicted:.....	3.2%
Ethnicity:		Participation in programs:(N size)	
White.....	40.4%	Community Penalties	230
African-American.....	56.5%	Community Service	1258
Other.....	3.1%	Electronic House Arrest-Parole	73
		Electronic House Arrest-Probation	609
Marital Status:		IMPACT	266
Single.....	67.6%	Intensive Parole	148
Divorced/Separated:.....	16.5%	Intensive Probation	1106
Married/Widowed:.....	15.9%	Monetary Conditions	2260
		Parole and Terminate	421
		Prison Maxout	190
		Regular Parole	1572
		Regular Probation	2948
		Special Probation	595
		TASC	311
Mean number of prior arrests:		Current Offense:	
Any offense.....	4.28	Violent felony.....	374
Violent offense.....	.38	Sex felony.....	128
Sex offense (felony).....	.07	Property felony.....	1132
Property offense.....	2.20	Drug felony.....	999
Drug offense.....	.87	Other felony.....	55
Other offense.....	.24	Violent misdemeanor.....	286
		Property misdemeanor.....	804
		Drug misdemeanor.....	205
		Other misdemeanor.....	299
Mean number of subsequent arrests:...	1.36	Participants who had at least one subsequent arrest:	
		Any offense.....	39.0%
		Violent offense.....	10.0%
		Sex offense (felony).....	4.4%
		Property offense.....	24.4%
		Drug offense.....	15.8%
		Other offense.....	7.8%

misconception may be in confusing a statistically significant correlation with a cause.

A somewhat nonsensical illustration of this cause-effect issue is found in the following scenario: Suppose one wishes to examine the causes of fires. One collects all the information about a series of fires in a town, and finds that in every case, a fire truck was present at the scene of the fire. One cannot assume that simply because there is a strong statistical correlation between fires (the dependent variable) and fire trucks (the independent variable) that fire trucks cause fires. So the appearance of a statistically significant relationship, or correlation, between a given independent variable, such as race, may not be causing the dependent variable, i.e. subsequent arrest. It may be that race and subsequent arrest are merely correlated, yet have no cause-effect relationship at all.

With respect to the race variable, we reiterate that there was no variable which measured income. If our results showed a correlation between being African-American and recidivism (which it did), one should bear in mind that a disproportionate number of African-Americans have low incomes. So the race variable may be a “proxy” of sorts for low income. Perhaps low income, rather than race, is the “cause” of recidivism.

Something else that must be kept in mind is what researchers call an “artifact”. An artifact is a result that appears to help explain an outcome, but simply does not make sense, or defies most logical explanations. A university professor wanted to identify factors associated with criminal behavior among a group of homeless teenagers. The researcher collected as much background information on the youths as possible, including family background, family income, etc. He found a statistically significant, positive relationship between a child doing homework and committing crime. In other words, based on those findings, if children consistently do their homework, they are more likely to become delinquent than those who do not do their homework. Such a finding could probably be dismissed as aberrant or not true.

Logistic Regression Comparing Programs’ Recidivism

Tables 17 -19 contain the results of 15 logistic regression models. The left column lists the independent variables. The top cell in the 6 columns to the right lists the six dependent variables, or outcomes, examined: 1) any subsequent arrest; 2) a subsequent arrest for a violent offense or for a felonious sexual offense;¹⁹ 3) a

subsequent arrest for a property offense; 4) a subsequent arrest for a drug offense; 5) a subsequent arrest for other offenses.

Table 17 on page 46 includes logistic results on all offenders from the selected sample (N= 4,282). Table 18 on page 47 includes only those offenders on regular probation, intensive probation, electronic house arrest-probation, TASC, Community Penalties, community service, IMPACT, and special probation (N=3,846). Table 19 on page 48 includes only those offenders in the various parole programs, or those who were paroled and terminated, or those released after maxing out on their prison sentence (N=2,585). IMPACT and special probation were included in both groups because they combine incarceration with community supervision.

Insignificant Results

When interpreting the results of these models, what should be examined first are the asterisks (*, **, or ***) beside some of the numbers. *If there is no asterisk beside the number, the variable in question was not statistically significantly related to the outcome, i.e., subsequent rearrest, and it can be disregarded as insignificant.* For example, the variables “Single“ and “Other Felony“ in Model 1,

Table 17: Logistic Regression All Programs

Independent Variables	Any New Offense	Violent Offense	Property Offense	Drug Offense	Other Offenses
Age	-.0859***	-.1090**	-.0875**	-.0235	-.0999*
Age Squared.....	.0005	.0007	.0006	-.0004	.0006
African-American.....	-.3225***	-.5285***	-.1416***	-.5203***	-.1770**
Male.....	-.2310***	-.4244***	-.2312***	-.1403	-.3260**
Marital Status:					
Single.....	-.0059	-.0815	-.0680	.1288	-.0928
Married or Widowed.....	-.1497*	-.0626	-.1611	-.1655	.0446
Sentenced in Suburban County..	-.0442	-.0277	-.0351	-.1154*	-.0886
Pled Guilty.....	-.1336	-.0038	-.1409	-.0490	-.1122
Current Offense:					
Violent Felony.....	-.2136	.1774	-.2720*	-.1068	.0744
Sexual Felony	-.1875	.1770	.1434	-.2084	-.8741
Property Felony.....	-.0774	-.2431	.1389	-.3546**	-.0861
Drug Felony.....	-.2186**	-.4880***	-.6898***	.6012***	.0148
Other Felony.....	.2849	-.1535	.3037	-.4312	.5097
Violent Misdemeanor .....	.0284	.4696*	.0474	.0174	.5028*
Property Misdemeanor .....	.2402*	-.0674	.6086***	-.2103	-.1681
Drug Misdemeanor .....	.1072	-.3740	-.4583*	.8283***	-.3031
Program:					
COMPEN.....	.1365	.3232*	-.0757	.2360*	.2270
Community Service.....	.0668	.0301	.0461	.0290	.0839
Monetary Conditions.....	.0544	.0746	-.0376	-.0032	-.0076
TASC.....	-.0973	.0182	-.1828*	-.0026	.0597
Regular Probation.....	-.0532	-.0917	.0342	-.0848	-.1984*
Intensive Probation.....	-.3054***	-.1414	-.2879***	-.2367***	-.1934*
EHA-Probation.....	-.2909***	.0108	-.2407***	-.1966*	-.1148
IMPACT.....	-.0673	-.0561	.0210	.0192	-.1332
Special Probation.....	-.0934	-.1079	.0350	-.1341	-.0608
Regular Parole.....	-.2187**	-.2198*	-.1020	-.2354**	-.2966**
EHA-Parole.....	-.3354**	.0614	-.2214	-.4164**	-.4244**
Intensive Parole.....	-.1032	-.1336	-.0718	-.0311	-.1796
Parole and Terminate.....	-.2611***	-.0442	-.2126**	-.2324**	-.2680*
Prison Maxout.....	-.1596	-.3842***	-.0481	-.0117	-.1908
Number of Prior Arrests .....	.2777***	.2468***	.2533***	.1792	.2526***
Prior Arrests Squared	-.0101***	-.0094***	-.0090***	-.0069***	-.0091***
Number of cases in model.....	4282	4282	4282	4282	4282

Table 18: Logistic Regression Results Including Participants from Community Based Programs

Independent Variables	Any New Offense	Violent Offense	Property Offense	Drug Offense	Other Offenses
Age.....	-.0793**	-.1071**	-.0835**	-.0169	-.1025*
Age Squared.....	.0004	.0007	.0005	-.0005	.0007
African-American.....	-.3445***	-.5400***	-.1804***	-.5250***	-.1906**
Male.....	-.3005***	-.5281***	-.2523***	-.2498**	-.4793***
Marital Status:					
Single.....	.0027	-.0982	-.0663	.1660	-.0481
Married or Widowed.....	-.1596*	.0199	-.1674	-.2011	-.0007
Sentenced in Suburban County..	-.0242	.0067	-.0237	-.0925	-.0599
Pled Guilty.....	-.1251	.0509	-.1291	-.0520	-.0420
Current Offense:					
Violent Felony.....	-.1442	.3135	-.2700	.0503	.1386
Sexual Felony.....	-.0637	.1684	.1878	-.0907	-.7088
Property Felony.....	-.0619	-.2955*	.1344	-.2924*	-.0326
Drug Felony.....	-.2319**	-.5084***	-.7197***	.6685***	-.0207
Other Felony.....	.2653	.0031	.3063	-.7967	.4558
Violent Misdemeanor.....	.0196	.4037*	.1300	.0225	.4511
Property Misdemeanor.....	.2089*	-.0913	.5874***	-.2285	-.2224
Drug Misdemeanor.....	.0280***	-.4631	-.5072*	.8067***	-.3801
Program:					
COMPEN.....	.1416	.3389*	-.0633	.2305	.2247
Community Service.....	.0710	.0393	.0362	.0296	.0910
Monetary Conditions.....	.1548***	.1495*	.0153	.0918	.1199
TASC.....	-.0877	.0466	-.1967**	.0039	.0946
Regular Probation.....	.0440	.0236	.0298	.0407	-.0004
Intensive Probation.....	-.3333***	-.1711*	-.3304***	-.2469***	-.2177**
EHA-Probation.....	-.2524***	.0628	-.2202***	-.1810*	-.0150
IMPACT.....	.0364	.0407	.0588	.1176	.0488
Special Probation.....	-.0410	-.0521	.0538	-.0871	.0441
Number of Prior Arrests.....	.2797***	.2814***	.2582***	.1714***	.2704***
Prior Arrests Squared.....	-.0102***	-.0110***	-.0093***	-.0066***	-.0100***
Number of Cases in Model.....	3846	3846	3846	3846	3846

Table 19: Logistic Regression Results Including Participants Released from Incarceration, Including Special Probation and IMPACT

Independent Variables	Any New Offense	Violent Offense	Property Offense	Drug Offense	Other Offenses
Age.....	-.0874*	-.1068*	-.0746	.0076	-.0734
Age Squared.....	.0003	.0007	.0003	-.0010	.0002
African-American.....	-.2820***	-.5077***	-.0311	-.5431***	-.1262
Male.....	-.1434	.1243	-.0876	-.0940	-.1835
Marital Status:					
Single.....	-.0147	-.1244	-.0598	.0864	-.0738
Married or Widowed.....	-.1003	.0623	-.1290	-.1647	.1348
Sentenced in Suburban County..	-.0535	.0028	-.0396	-.1437**	-.1162
Pled Guilty.....	-.1836	-.1558	-.3127	.0498	-.2285
Current Offense:					
Violent Felony	-.1934	.1044	-.2984*	-.1079	.1240
Sexual Felony.....	-.3617	.1350	-.0523	-.1328	-.7581
Property Felony.....	-.1442	-.2777	.1061	-.4245**	-.1762
Drug Felony.....	-.1357	-.5392***	-.6510***	.5830***	.0455
Other Felony.....	.4971	-.0348	.4121	-.2493	.7126
Violent Misdemeanor	-.0294	.2931	-.3298	.1424	.6647*
Property Misdemeanor .....	.2047	-.1205	.7050***	-.1964	-.0188
Drug Misdemeanor .....	.0391	-.0270	-.0703	.6533	-.9778
Program:					
COMPEN.....	.1777	.4930*	.0600	.1635	.4341
Community Service.....	.0322	-.0159	.0273	.0598	.0950
Monetary Conditions.....	.1703**	.1243	.0582	.0296	.1060
TASC.....	-.0554	-.0615	-.1663	.1283	-.0911
IMPACT.....	-.0010	-.0997	.0601	.0815	-.1055
Special Probation.....	-.0481	-.1441	.0680	-.0393	-.0376
Regular Parole.....	-.2632***	-.1978*	-.2390***	-.2270**	-.2369*
EHA-Parole.....	-.0903	.1271	-.0027	-.1978	-.2570
Intensive Parole.....	-.2366*	-.2217	-.2080	-.0678	-.2435
Parole and Terminate.....	-.0977	-.0261	-.0446	-.0475	-.1073
Prison-Maxout.....	.0233	-.3660**	.1146	.2014	-.0565
Number of Prior Arrests .....	.2956***	.2573***	.2659***	.1906***	.2353***
Prior Arrests Squared	-.0107***	-.0099***	-.0095***	-.0072***	-.0087***
Number of cases in model.....	2585	2585	2585	2585	2585

are not significant predictors of rearrest, nor are they significant predictors of not being rearrested.

.05, .01, and .001 Results

If the result has one asterisk beside it, it is said to be significant at the .05 level. This means there is a less than 5% chance that the results were due to sampling error. While other variables, which were not included in the model, such as income, intelligence quotient, or peer group, may be correlated with subsequent rearrest without our knowledge, there is a 95% certainty that results with one asterisk beside them are not the product of sampling error.

If the result has two asterisks (**) beside it, that means that it is significant at the more conservative .01 level. This means that there is a 99% certainty that the result was not due to sampling error. If the result has three asterisks (***) beside it, there is a 99.9% certainty that the result was not due to sampling error. Three asterisks does not necessarily mean that a variable was more significant than those with two or one. It merely indicates that the score was not the result of sampling error.

Beta Scores

If the result has at least one asterisk beside it, the next item to examine is the beta score. The larger the absolute value of the beta score, i.e., the further away it is from 0, whether in a positive or negative direction, the more important the variable in explaining the outcome. *If the result is positive, or greater than 0, it means that the variable is positively associated with not being rearrested. If the result has a negative value, or less than 0, the variable is associated with being rearrested. So, for the purpose of this study, the larger the negative number, provided that number has at least one asterisk beside it, the more that variable was associated with being rearrested. The larger the positive numbers, provided that score has at least one asterisk beside it, the more that variable was associated with avoiding rearrest.* The next section discusses the significance of each independent variable relative to rearrest, or avoiding rearrest.

Age

When conducting the logistic regression analysis, we squared the age variable in order to examine the nonlinear effect on the chance of being rearrested. We wanted to see if age had a diminishing effect as offenders grew older, which turned out to be

true (Clarke and Harrison 1992). In 10 of the 15 regression models listed in Tables 17-19, age was negatively correlated with avoiding rearrest. The age score suggests a negative linear relationship between age and avoiding rearrest. In other words, the younger the offender, the greater the likelihood of rearrest. This finding is not surprising and coincides with most research on age and crime.

When the age variable was squared, we found that age had a diminishing effect as offenders got older, as did Clarke and Harrison in the 1989 study. In fact, age was a significant predictor of rearrest in 10 of the 15 regression models. But once the age variable was squared, the variable was not significantly correlated in any of the models, with either rearrest or avoidance of rearrest.

Race

To facilitate the logistic regression analysis, we dichotomized the racial groups into African-American or non-African-American. This procedure of dichotomizing variables, commonly referred to as “dummy coding”, was done with several of the categorical variables: gender, marital status, county size, plea of guilty, and current offense. Variables are dummy coded because logistic regression uses one of the categories within the variable as a baseline to be compared against the other

categories. In the case of race, we compared recidivism among African-Americans versus non-African-Americans.

In 13 of the 15 regression models, being African-American was a significant predictor of being rearrested. When the entire sample of 4,282 was analyzed (Table 17), the relationship was strongest with regard to being arrested for a violent offense (-.5285), and almost as strong for a drug arrest (-.5203). Table 18, consisting of offenders in the community-based programs, contains similar results. In Table 19, which includes released prisoners, special probationers and IMPACT graduates, the stronger association was found with a drug rearrest, followed closely by a rearrest for a violent offense, which also included felonious sex offenses.

Finding an association between race and recidivism is not surprising, and leads to innumerable speculation. A full discussion would go beyond the scope and range of this report, but a few possibilities may be worth mentioning. We did not include any variables measuring income or employment. Nor could we identify criminogenic neighborhoods, sometimes referred to as “hot spots” of crime, which attract much attention from local law enforcement (Sherman et al. 1989).

Male

Being male was significantly associated with rearrest in 9 of the 15 regression models. The strongest association was found in the community programs model (Table 18) and rearrest for a violent offense, followed closely by rearrest for “other” offenses. Given prior research on gender and crime, as well as the commonly accepted idea that men commit more crime than women, this finding is not surprising. There is one point worth noting. Clarke and Harrison found being male significantly associated with rearrest in all of their models, not just 9. These slightly different findings coincide with the idea that though men still account for most crime, women, for a number of reasons, have become more visible in crime statistics recently than at one time.

Marital Status

We used the divorced/separated variable as the baseline in this model. Our findings do not lend support to the commonly held idea that singles account for more criminal activity than married people. In fact, being married or widowed was significantly associated with rearrest for any offense in the overall model and the community programs model.

There was no way of knowing how the individuals collecting the data treated common law marriages or on-again, off-again live-in relationships. Many individuals involved in the criminal justice system, as well as some who are not, are sometimes involved in such familial relationships. This could explain the findings here, or it could be that age canceled out the effects of marital status, since single people are more likely to be young than old.

County Size

Though crime is a social problem in rural, suburban, and urban communities, it always has been more endemic in urban areas. The UCR does not classify any North Carolina counties as urban, so we only categorized the counties as either rural or suburban. It was thought that being from a suburban county would be associated with recidivism more than being from a rural county.

This was the case in only one of the 15 models. Being sentenced in a suburban county was associated with rearrest for a drug offense among the released prisoner group (Table 19). The drug problem, like crime, is found in all types of communities. But the drug problem, and efforts to combat it, are more concentrated in densely populated areas. It should not be surprising to find rearrest for a drug offense associated with being sentenced in a suburban county.

Plea of Guilty

Whether the individual pled guilty or was convicted by trial was not significant. It was thought that those who admitted guilt might be more cooperative and less resistant to change, but the results did not support that idea.

Current Offense

As mentioned earlier, we only included the offense carrying the longest sentence for each individual, interpreting this as the most serious offense. Many of the offenders were under sentence for more than one offense, in some cases for multiple categories of offenses. The category “other misdemeanor” was used as the baseline variable.

Violent Felony

Being under sentence for a violent felony, such as murder, armed robbery, and various assaultive offenses, not including sexual assault, was significantly related to rearrest for a property offense in the overall model and in the released prisoner model.

Intuitively, one might expect a direct association between prior and future types of criminal behavior. We did not find that association with respect to violent felonies, for a number of possible reasons. First, individual and collective human behavior does not always conform to widely accepted “common sense”. Secondly, as mentioned in the last paragraph, some offenders may have been under sentence for other types of offenses, or may have committed other types of offenses in the past; criminals do not always specialize. Thirdly, violent crime is not as common as property crime.

Sexual Felonies

Being under sentence for a felonious sex offense, such as rape, felonious sexual assault, and child molestation, was not statistically significant in any of the models. The popular notion that all sex offenders are bound to reoffend was not supported by the findings. However, a large portion of sex-related crime is not reported to law enforcement.

Property Felony

This variable was significantly associated with a drug-related rearrest among all three groups, especially among the released prisoners. This finding supports the

often overused maxim that drug users steal to support their habit, but that idea was not supported by the scores on the property misdemeanor variable.

Being under sentence for a felonious property offense was also correlated with rearrest for a violent or felonious sexual offense in the community programs model (Table 18).

Drug Felony and Drug Misdemeanor

Being a felonious drug offender was associated with rearrest in 8 of the 15 models. Being a misdemeanor drug offender was associated with rearrest for a property offense in the overall model and the community programs model. This supports the possibility that felonious drug offenders pose a threat to public safety.

In addition to using drugs, many felonious drug offenders are involved in the “business” aspects of the crime, such as manufacturing, transportation, and sale. It could be that their propensity to be rearrested for other forms of crime is an “occupational hazard” of the drug business, rather than a result of drug use itself. This statement is supported by the finding that misdemeanor drug offenders, who are probably just users of fairly non-serious drugs, and not being involved in the drug “business”, or in the use of more serious drugs, was not as frequently associated with rearrest as was the drug felony variable. In fact, being a

misdemeanor drug offender was significantly associated with avoiding rearrest for a violent offense among the community programs group.

Being a felonious or misdemeanor drug offender was significantly associated with avoiding rearrest for a drug offense. In other research, the lead author of this study found that contrary to popular opinion, being a drug offender on North Carolina probation significantly associated with success on probation, even when using a drug offense-related revocation as the dependent variable (Jones and Johnson 1995).

Other Felony

This category included a number of offenses, including arson, habitual drunk driving, escape, habitual felon, and many others. It was not significantly associated with rearrest or avoiding rearrest in any of the models.

Violent and Property Misdemeanor

These variables were significantly associated with avoiding rearrest for several categories of offenses. They were not significantly correlated with rearrest in any of the models. Even though many such offenders will continue to commit crime, the

finding suggests that placing misdemeanor offenders in the community rather than jail may be a relatively low-risk gamble.

Program Variables

We did not create a variable called “program” and place offenders in one category, then use one of the other programs as a baseline, despite some suggestions that we do so to conform to the procedure used in the 1989 study. Our rationale is rather involved, but it should be stated.

The judicial system utilizing more sentencing options in 1992-93 than in 1989. By 1992, offenders who had formerly been placed in one or two programs were being placed in a myriad of correctional programs. For example, the IMPACT program had just begun at the time of the 1989 study, so it was not examined by Clarke and Harrison. Our study included over twice the number of intensive probationers, and over four times the number of EHA participants than the Clarke and Harrison study, because the sanctions were being used more in 1992-93 than in 1989.

One of the mandated tasks of this study was to examine the impact of a combination of programs on recidivism. Had we placed an offender in only one

program category, and conducted the logistic regression using one program as a baseline variable, we would not have been able to examine the effects of participating in other programs. For example, had we assigned an offender to the IMPACT program, without regard to whether he had performed community service or been on regular probation, we would only have seen the effects of participation in IMPACT, not the other programs.

The other option, which would have been impossible, would have been to create dozens, or even hundreds of variables, giving offenders credit for each program in which they had participated. For example, category one might have been: EHA-Probation, IMPACT, monetary, and regular probation. Category two may have differed in a slight respect from category one; the offender in category two may have had community service ordered, or have also been on intensive probation at some time. Creating the number of variables necessary for such a task would not only have been logistically impossible, it would have rendered the results of a logistic regression model useless. The other alternative would have been to conduct a very complicated path analysis model. Given the time constraints on this project, we were unable to seriously explore that option, plus we believe that the logistic regression models provided as clear a picture as possible given the information we had at our disposal.

The Clarke and Harrison study found that several program variables were significantly related to rearrest, including: 1) intensive supervision (parole and probation combined), 2) paroled and terminated, 3) regular parole, and 4) special probation. Our study finds a fairly consistent association between rearrest and: 1) intensive probation; 2) paroled and terminated, and 3) regular parole.

One difference between our findings and those of Clarke and Harrison are that some of our beta scores were higher than those in the Clarke and Harrison study. This is partly explained by the difference in the way our logistic regression models were constructed, a point which was made at the beginning of this subsection. Secondly, we found an association between EHA-probation and rearrest that Clarke and Harrison did not find. The program was seldom used in 1989, but had expanded by 1992. In other words, with regard to EHA-probation and intensive probation, “three short years” did make a difference. Also, as Tables 3 and 4 indicate, these two programs had a higher number of recidivists than the other programs. So it should not be unreasonable to assume that a logistic regression analysis would find a correlation between program participation and rearrest. Aside from those and other occasional differences which will be discussed in the following subsections, our findings are not radically different from those of Clarke and Harrison.

Program Variables Which Were Not Statistically Significant

Three programs showed no significant association with either rearrest or avoidance of rearrest: community service, IMPACT, and special probation.

Community service was found to be associated with avoiding rearrest by Clarke and Harrison. The effect of imposing this sanction is still somewhat fuzzy, since neither of the studies' authors had access to the number of hours performed on community service.

IMPACT was not included in the Clarke and Harrison study. Since IMPACT participants were younger than those in other programs, it is possible that the effects of IMPACT were masked by the age variable.

Community Penalties

COMPEN was not associated with rearrest in any of the models. It was significantly associated with avoiding rearrest for a violent offense in all three models. The COMPEN variable was associated with avoiding rearrest for a drug offense in the overall model, but not the other models.

Monetary Conditions

As with community service, we only knew how much court cost, fine and/or restitution an offender was ordered to pay, and we coded this variable as “yes”, monetary condition was ordered, or “no”, no court costs, fine or restitution was ordered. The monetary variable was significantly correlated with avoiding rearrest for any new offense and violent offenses in the community programs model, and with avoiding rearrest for any new offense in the released prisoner model.

With all of the many interesting innovations in community corrections, it is easy to overlook this sanction, or merely view it as a revenue producer. Hillsman and Greene (1992) argued that fines, especially those based on an offender’s income, are an attractive and unmistakably punitive sentencing option. Some European countries utilize fines as a stand-alone punishment for serious misdemeanors and minor felonies.

TASC

This variable was significantly associated with rearrest in two of the models. It was associated with rearrest for a property offense in the overall model, and rearrest for a property offense in the community programs model. Felonious and

misdemeanor drug offenses were also correlated with property rearrest. Since TASC primarily serves a drug dependent clientele, there may be a connection.

Regular Probation

The regular probation variable was significantly correlated with rearrest in one model. It was associated with rearrest for “other” types of offenses in the overall model. With all of the criticism directed at regular probation supervision over the past decade, and so much attention focused on new sanctions, the fact that regular probation was not correlated with rearrest more often is noteworthy. The Clarke and Harrison study treated regular probation as the baseline variable in its logistic models, so a comparison was not possible.

Intensive Probation

This variable was significantly associated with rearrest in nine of the ten models in which it was included. This variable had the highest beta scores of any of the program variables in most models.

There are several possibilities as to why these results occurred. Intensive probation, especially before the implementation of structured sentencing, was designed as a prison alternative. Therefore, it is reasonable to assume that the

program would attract a high-risk clientele. These individuals stood a greater chance of recidivating than regular probationers; such was and always has been the nature of the program.

Officers who supervise intensive probationers usually report the names of their clients to local law enforcement officials. We are not suggesting that law enforcement unfairly targets these individuals, but being put on a list of people to watch increases the likelihood of being arrested by those doing the watching. Along those same lines, many of the surveillance officers who assisted intensive probation officers, especially those hired in the early 1980's and early 1990's, had law enforcement experience, quite often in the same jurisdiction where they worked as a surveillance officer. This also increased the closeness of the relationship between intensive probation teams and law enforcement.

Between 1988 and 1992, North Carolina experienced the greatest percentage increase in crime rate of any state in the nation (Morgan et al. 1994). During this time, North Carolina was experiencing a tremendous prison and court docket crowding crisis. Intensive probation could have served as an outlet for this backlog, since it, along with EHA-probation, were specifically designed to divert offenders from being incarcerated.

Clarke and Harrison also found a significant association between intensive supervision and recidivism in two of their models. The beta scores in the Clarke and Harrison models were smaller than those in the present study. Clarke and Harrison did not separate intensive supervision into probation and parole categories. So the difference in the findings may be explained by different model construction, since intensive parole was not as significant in our models as intensive probation.

Electronic House Arrest-Probation

This variable was significantly correlated with recidivism in six of the models, and the beta scores were almost as high as those for the intensive probation variable. Some of the possible explanations for the intensive probation variable should hold true for this variable as well. Both programs experienced dramatic increase in use between 1989 and 1992, and both were used as outlets to alleviate institutional crowding during a time when the crime rate in North Carolina was increasing dramatically. Clarke and Harrison found no significant relationship between EHA-Probation and rearrest or avoidance of rearrest.

Regular Parole

In the ten models which included this variable, nine showed regular parole being significantly correlated with rearrest. Since this form of community supervision is politically unpopular, and is in the process of being abolished, many may welcome this finding to reinforce opinion against regular parole.

If one chooses to use these findings as an argument against the use of parole, one should consider the alternative. Releasing people with no parole supervision is also associated with rearrest. The parole and terminate variable and the prison maxout variable were also associated with rearrest in some of the models.

Electronic House Arrest-Parole

This variable was strongly and significantly associated with rearrest in three of the five overall models, but none of the released prisoner models. Compared to other forms of community based sanctions not involving ex-prisoners, EHA-Parole was strongly tied to rearrest, but this significance dropped out when EHA-Parolees were compared only to other ex-prison or jail inmates. This group was not included in the Clarke and Harrison study.

Intensive Parole

This variable was significantly associated with rearrest for any offense in the released prisoners model, but in none of the other models.

Parole and Terminate

The parole and terminate variable was significantly correlated with rearrest in four of the overall models, but none of the released prisoner models. This leads back to the discussion of regular parole and EHA-parole variables. Though parole programs may be associated with rearrest, so is being paroled and terminated, with no supervisory strings attached to release.

Using a different variable, amount of time served in prison, Clarke and Harrison found a relationship between recidivism and amount of time served in incarceration. We did not use a variable measuring time served in incarceration because we were dubious as to its veracity, we may have found results similar to Clarke and Harrison's with this variable and the prison maxout variable. Clarke and Harrison suggested that experiencing incarceration may have impacted the propensity to be rearrested. The results of our study suggest a similar conclusion. Though some of the probation and treatment-based programs were associated with rearrest, all of the prison-release type programs (except IMPACT and Special Probation, which

involved different forms of incarceration) showed a correlation between having been in prison and being rearrested.

Prison Maxout

The prison maxout variable was significantly correlated with rearrest in two of the ten models which included it. Of all the program variables, this variable showed the strongest relationship with rearrest for a felonious sex offense or a violent offense. The same statements listed in the discussion of the parole and terminate variable should apply here. This finding should not be surprising, since these individuals, for one reason or another, are believed to be too high risk to be released from prison in any other fashion except serving their full sentence.

Prior Arrests

Our experience with this variable was interesting to say the least. Our preliminary finding that number of prior arrests was significantly associated with avoiding rearrest contravened most commonly accepted notions of predicting recidivism, as well as those of Clarke and Harrison, though they found a correlation between avoiding rearrest and prior arrests in three of their models.

We thought that 1) the appearance of this linear relationship might be diminished if the various categories of prior arrests were combined into one prior arrests variable, and squared; and, 2) that another variable in the data set was acting as proxy for prior arrests. Both beliefs were validated by experimenting with the regression models.

First, we collapsed the various categories of prior arrests into one variable, and squared the value. We did this because, by dividing the prior arrests variable into categories, using the squared value would not be of much use with such small numbers. A larger number is more appropriate when using squared values, as was the case with the age variable. After we combined the variables and squared the value, not only was the relationship diminished, it was reversed. The prior arrests squared variable showed a significant association with rearrest in all of the models, though the beta values were smaller.

The next step was experimenting with different models, by deleting and inserting variables from the logistic regression analysis to examine the effects on the prior arrests score, thinking that a certain variable may have been masking the effects of prior arrests.

We discovered a change in the beta scores of the prior arrests variables when we removed, then reinserted the age and age squared variables from the models. Our

conclusion was one based on criminological research. Older offenders, those aged 35 and up, are more likely to have a higher number of prior arrests than young offenders, especially those below the age of 25. But younger offenders are more likely to be rearrested than older offenders. So, when removing the age variables from the analysis, then reinserting them, affected the beta scores of the prior arrests variable, we concluded that older offenders, even those with a high number of prior arrests, were more likely to avoid rearrest than younger offenders with few prior arrests.

Discussion and Conclusions

One point which was mentioned in the opening summary, and several times in the text, which should be repeated is that **this was not a controlled experiment. A statistical association is not the same as a cause-effect relationship. There may have been, and no doubt were more factors at work with respect to the outcome than were included in the study.**

Of the 33,111 offenders examined, 22,315 (67.4%) avoided rearrest during the follow-up period. Despite the dreadful conclusions often made with respect to crime and correctional clientele, the results indicate that only about one-third of the individuals from this study were rearrested for a non-misdemeanor traffic offense during the follow-up periods. The percentage of offenders rearrested in the Clarke and Harrison study was 31.2%.

One primary difference between the present study and the Clarke and Harrison study is the follow-up time. Clarke and Harrison tracked offenders for an average of 26.7 months. **The offenders in the current study were tracked for an average of 36.7 months.** This would help explain the increased recidivism rates, in terms of raw percentages, among the various programs, but it would have no effect on the

multivariate analysis which examined the relationship among independent variables and recidivism.

The most consistent indicators of rearrest included the **squared value of prior arrests**, which was affected by an offender's age. This suggests that there is no direct linear relationship between prior record and subsequent arrest, but that as an offender gets older, the likelihood of getting arrested decreases even if the number of prior arrests is high. Younger offenders with fewer prior arrests are more likely to be arrested than older offenders with more prior arrests.

Another fairly consistent indicator of rearrest was **intensive probation**. Possible explanations concern the close relationship between members of the intensive probation team and local law enforcement, the dramatically increased use of the program to include previously prison-bound offenders, and the use of intensive probation as a prison/jail alternative at a time when crime in North Carolina was increasing at a pace which outdistanced all other states in the nation.

Being **African-American** was correlated with rearrest in several of the models. Speculations as to the cause of this finding are innumerable, but one factor which could not be controlled was income, which may have been more correlative with rearrest than race.

The **regular parole** variable was associated with rearrest in several of the models, but so was the **EHA-parole variable**, the **parole and terminate** variable, and the **prison maxout** variable. This suggests that the experience of prison, rather than the form of prison release, may be of greater importance regarding subsequent criminal behavior.

Being under sentence for a **felonious drug offense** was associated with rearrest in several models, but it was correlated with avoiding rearrest for a drug offense. Being under sentence for a **misdemeanor drug offense** was associated with rearrest for a property offense, but it was also associated with avoiding rearrest for a drug offense. These findings suggest that the effects of either using very potent drugs, or being involved in the hazardous business of manufacturing, transporting and selling drugs is correlated with other forms of criminal conduct.

The most consistent indicators of avoiding rearrest included being under sentence for a **misdemeanor property offense**, though being under sentence for a felonious property offense tended to be correlated with rearrest. The finding suggests that letting misdemeanor property offenders remain in the community is a relatively low-risk option.

Participation in the **Community Penalties** program was consistently associated with avoiding rearrest for a violent offense, and in one model, for a drug offense.

Having a **monetary condition** attached as part of a sentence or release condition was associated with avoiding rearrest in some of the models. The amount of money paid was not known.

The **variables** which were **not significantly correlated** with either being arrested or avoiding rearrest were: 1) being single; 2) pleading guilty versus having a trial; 3) being under sentence for a felonious sex offense; 4) being under sentence for a felonious offense classified as "other"; 5) having community service imposed; 6) participation in IMPACT, and 7) Special Probation.

There are two factors which should be mentioned or bear repeating. First, North Carolina experienced a 19.3% increase in its crime rate between 1988-1992, the sharpest increase of any state in America. From 1988-1993, the increase was 7.6%, which was ninth in the nation.

In response to the public concern about crime, law enforcement has become increasingly aggressive over the past decade. Rising crime rates and more aggressive law enforcement tend to perpetuate each other. As crime goes up, more officers are hired, police become more vigorous in making arrests, and more arrests are made, which causes the crime rate to rise even higher, which generates more public concern, etc.

The programs examined in this study, especially the probation programs, bore the brunt of crime increases, tougher enforcement, and the pressure to relieve prison crowding. Given the state of affairs with regard to crime and criminal justice in North Carolina over the past several years, and the longer follow-up period used in this study, finding an increase in the percentage of recidivists should not be surprising.

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Endnotes

¹ Chapter 507, Section 21.2, 1995 Session of the North Carolina General Assembly.

² According to Clarke and Harrison (1992), everyone arrested for felonies in North Carolina must be fingerprinted and those prints must be sent to the State Bureau of Investigation's Division of Criminal Information (DCI). The senior resident superior court judge develops a plan indicating which misdemeanor arrests are submitted to the DCI. Generally, those arrested for traffic offenses, except serious offenses such as hit and run, and driving while impaired, are not fingerprinted, and most of those that are fingerprinted are not submitted to the DCI.

³ A private nonprofit residential facility located in Winston-Salem, called Forsyth Initiative for Residential Self-Help Treatment, Inc. (FIRST), graciously agreed to participate in this study, and they supplied us with the appropriate data on their residents for the 1992-93 fiscal year. However, the facility only houses a small number of residents (approximately 75) at a given time. The residents usually stay at the center for a two-year period, resulting in very low turnover rates.

Seventeen probationers and one parolee were listed on the data sheet provided by FIRST officials. We were only able to locate four within our data set, three probationers and one parolee. Though no conclusions can be drawn from such a small sample, we can report that none of these individuals were arrested after leaving FIRST.

Special probation was included at the request of the Sentencing Commission staff. Monetary conditions, i.e., fines, restitution and court costs were included.

⁴ Petersilia (1989) discusses the logistical and political obstacles in trying to get individuals assigned to an intensive probation program in a true random fashion. Some offenders were unwilling to participate in the experiment, and some political and judicial officials were either unwilling to participate according to the researchers' wishes, or modified the terms of their compliance in variance with that of judges and prosecutors. Such problems disrupted the pure experimental design the RAND researchers hope to achieve.

⁵ The Department of Correction keeps track of the following racial/ethnic categories: Caucasian, African-American, Asian, Native American, Asian and other. There is no separate category to encompass Hispanics. We collapsed the Asian and Native American offenders into the "other" category.

⁶ There were some DCI "hits" we did not include. We did not include any hits for probation or parole violation, traffic offenses, except felonious traffic offenses such as vehicular homicide or habitual drunk driving. We did not include hits for failure to appear in court, or hits for civil actions.

⁷ We used the Department of Correction's codes to categorize offenders. We placed them into one of the nine categories discussed later in the report. We included a category of sex-related felonies, which included offenses such as rape and child molestation. We did not create a category of sex-related misdemeanors.

⁸ We placed the offenders into one of two county categories, rural or suburban. We used the same classification as that of the DCI in its Uniform Crime Report, or UCR, (State Bureau of Investigation 1995) for labeling counties as rural or suburban. The UCR does not classify any North Carolina counties as urban.

⁹ We drew our information from Clarke and Harrison (1992), Pearce (1996), and Pearce and Madler (1995).

¹⁰ We did not include probation supervision fees as a monetary condition.

¹¹ Why did so few have a monetary condition, since most judges impose financial sanctions on offenders not sentenced to incarceration? First, this group of 33,111 included those sentenced directly to prison, and were paroled, paroled and terminated, or maxed out. Many individuals in these categories did not have a financial penalty attached. Secondly, as noted in the previous footnote, probation supervision fees were not included. Thirdly, we did not count an individual as having a monetary condition unless he/she was ordered to pay at least \$10. Fourthly, some financial penalties may not have been reported to the DOC.

¹² This category includes Asians, Native Americans, and others.

¹³ Based on comments from program administrators, we acknowledge this figure is probably incorrect. Community service is a standard condition of intensive probation. But this is what the data from the Department of Correction indicated.

¹⁴ As with other programs which serve pretrial releases, TASC's pretrial clientele was not included in this study.

¹⁵ Recently enacted Structured Sentencing laws abolished parole for all offenses except driving while impaired. Parole was replaced by post-release supervision (See Clarke 1994).

¹⁶ The same information from endnote 13 applies here.

¹⁷ This information was not obtained from the North Carolina DOC, but from Morgan et al. (1994; 1995) which provided no breakdown as to individual parole or probation-related programs.

¹⁸ The percentage of subsequent rearrestees was higher for the sample than the entire population of 33,111, 39% versus 32.6%. This does not mean that the sample is not reflective of the entire population, because the sample is a *stratified* random sample. If the percentage of rearrestees was higher in some programs, which was true, then a truly representative sample, which included sufficient representation from all programs, would reflect those differences.

¹⁹ Despite our intentions to track the rearrests of felony sex offenders, we had to merge this group with the violent group because there were so few rearrests for sex-related felonies.