THE IMPACT OF PROBATION ON THE CRIMINAL ACTIVITIES OF OFFENDERS

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This study examines the impact of probation on the criminal activities of offenders using self-report and official records. In comparison to the year before arrest, the number of offenders self-reporting criminal activity declined, as did the rate of offending among those who continued to offend. Investigations of the different crime types revealed that the crime reduction effect of probation was mainly a result of its effect on property and dealing crimes. Probation was not significantly associated with reductions in person or forgery/fraud offenses. A Linear Structural Relationships (LISREL) analysis of the agent-response model investigated the impact of probation on self-reported criminal activities and probation violations during the first 6 months of probation. The analysis indicated that probation violations were associated with criminal activity. However, increases in the intrusiveness of conditions, in the agent's knowledge of misbehavior, or in how the agent responded to misbehavior were not associated with either criminal activity or violations of conditions.

Since its inception more than a century ago, there has been far more speculation than evidence regarding the effect of probation on those under supervision. In this study, we examine the effect of probation on a sample of persons

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under probation supervision. We address the following questions: Do offenders commit fewer crimes when they are on probation? Do violations of conditions of probation predict criminal activities? Is their criminal and high-risk behavior on probation mediated by the intensity or intrusiveness of probation, by the knowledge the agent has about the probationer's behavior, or by how the agent responds to misbehavior?

According to the most recent Bureau of Justice Statistics figures, approximately 58 percent of the 5.3 million adults under some type of correctional supervision during the calendar year 1995 were serving a term of probation (Maguire and Pastore 1997). Traditionally, probationers have been required to abide by standard release conditions in exchange for their freedom. However, an increasingly large percentage of probationers are now being required to comply with special conditions of probation, including mandatory drug testing, drug treatment, employment, and payment of fines or restitution (Langan and Cunnif 1992). Probation officers (POs) spend much of their time monitoring the behavior of probationers.

A substantial number of probationers fails to comply with release conditions, and they are consequently arrested and disciplined. Officers have a great deal of discretion in choosing how to respond to violations of special conditions (Clear, Harris, and Baird 1992). The most extreme sanction that officers may initiate is the revocation process. There is some evidence that both the number and rate of revocations have increased, and that these have had a significant impact on prison and jail populations (Parent et al. 1992). For example, in 1988, more than 60 percent of Oregon's prison admissions were due to probation or parole revocations. Furthermore, two-thirds of the prison admissions in Texas in 1989 and 60 percent of California's prison admissions were violators (Parent et. al 1992).

Despite its widespread use, probation has not been the subject of extensive research, unlike its brethren, the police, the court, and the correctional institution. Although researchers have more recently begun to devote considerable attention to probation, such inquiry has not been exhaustive. The balance of prior evaluation research seems to have focused on the impact of intensive supervision on recidivism reduction using official measures of recidivism (e.g., Langan and Cunnif 1992; Petersilia 1985; Whitehead 1989). In the early 1980s, the Georgia Department of Corrections published an internal evaluation of the state's Intensive Supervised Probation (ISP) program (Erwin 1987). The evaluation claimed that ISP had produced a number of important benefits. Most important, it claimed that ISP was associated with a reduction in criminal activities. These results generated a great deal of media and professional attention, and by 1990, jurisdictions in every state had

instituted ISP programs for adult offenders (Petersilia and Turner 1993). However, the results from the early research were not supported by later, more rigorous evaluations conducted by Petersilia and Turner (1990). In their random assignment study of 14 sites, they found no differences in rearrests when the ISP supervised offenders were compared with control groups. Furthermore, the ISP groups had higher technical violation rates. The researchers attributed this finding to the fact that those who received closer supervision, the ISP groups, were caught more often than others less closely supervised. However, the research design did not permit the researchers to untangle the relationships between supervision, technical violations, and criminal activities.

Several studies have examined the self-report criminal activities of offenders. Wright et al. (1992), for example, interviewed active residential burglars to obtain measures of the frequency of offending. Interestingly, 20 percent of the total sample of 105 burglars were serving time on probation, parole, or a suspended sentence, suggesting that these offenders were not deterred by community supervision. On the other hand, the finding that those who had never been arrested for anything, on average, offended more frequently and committed more lifetime burglaries than their arrested counterparts suggests that being arrested may have some crime reduction effect. In another self-report study of prison inmates, Horney, Osgood, and Marshall (1995) found short-term changes in life circumstances, such as illegal drug use, school, or living with a spouse, were associated with changes in criminal activity. However, probation and parole supervision were not associated with reductions in criminal activities for the serious offenders in their sample.

Thus, we are left with several questions regarding the effects of probation that have yet to be fully explored. First, does an arrest and subsequent probation reduce the criminal activities of offenders? This is a particularly important question because most estimates of the impact of imprisonment for incapacitation research are based on estimates of the number of criminal activities that offenders commit when they are in the community. If this rate is affected by probation status, then the impact of imprisonment may be less than originally expected.

The second issue involves the imposition of technical conditions of probation. Are more intrusive conditions associated with reductions in criminal activities and violations? What are the relationships between criminal activity, technical violations, the agent's knowledge of violations, and the agent's responses to violations? These questions are of particular importance because the supervision statuses of increasing numbers of offenders are revoked during community supervision (both probation and parole) (Parent

et. al. 1992). If there are no relationships between criminal activities and conditions of probation, violations of the conditions, and the actions taken by agents in response to violations, then we have to question the value of setting increasing numbers of technical conditions and what we hope to accomplish with the conditions.

According to the agent-response model of the relationships between special conditions and criminal activities proposed by MacKenzie and Souryal (1997), conditions are set to attain a specific goal. Whether the goal is to control behavior or to rehabilitate the offender, the ultimate objective is to reduce the rate of criminal offending. For example, conditions may be set to reduce the likelihood of a specific behavior (e.g., drug use) that is assumed to be associated with criminal activity. Theoretically, the requirement that a probationer attend a treatment program may reduce the rate of drug or alcohol use and, consequently, the criminal behavior associated with substance abuse.

However, this process may be mediated by misbehavior (technical violations), verification or knowledge, and the type of agent response. Although there may be a special condition requiring the offender to attend drug treatment, the agent may not know if the offender does indeed comply. Furthermore, even if the agent knows whether the offender is in compliance, what may be most important is the agent's response to the evidence of noncompliance (e.g., dirty urine). Thus, if no sanctions are imposed in response to misbehavior (e.g., drug use), probationers may remain noncompliant. This study is designed to examine the impact of such factors on the criminal activities of offenders.

RESEARCH DESIGN

In response to the disturbing observation that increasing numbers of offenders are being revoked to prison as a result of either technical violations or new crimes committed during community supervision, this study examined the self-reported criminal activities of offenders before arrest and during probation. The primary objective of the research was to examine the impact of probation on the criminal activities of offenders and the relationship between these activities and technical violations, conditions of probation, and the knowledge and actions of the probation officers (POs). For example, do offenders commit fewer crimes while they are on probation when compared to the year before arrest? Furthermore, does the violation of technical conditions of probation serve as a proxy for criminal behavior? Are technical

violators no more likely than those in full compliance with release conditions to commit new crimes?

In brief, self-report data were collected at two points in time from probationers sentenced to probation supervision. Probationers were asked to provide retrospective information on criminal activity, violations of release conditions, and community adjustment for the year prior to arrest and for the first 6 months of probation. Extensive data from official probation records were recorded, and official criminal history records were examined at the end of 1 year.

The research design is particularly well suited to examine changes in criminal activity over time, factors that are associated with such activity, and the relationship between technical violations and criminality. First, the use of self-report data is unprecedented in the study of probationer behavior. Although recent research exploring the criminal activity of prison inmates (Horney and Marshall 1991, 1992) and active burglars (Wright et. al. 1992) has provided unique insight, such techniques have not been applied to the study of probation. Second, compliance with conditions of supervision is difficult to monitor. Much criminal activity does not come to the attention of the criminal justice system. Therefore, in order to establish the existence of a valid relationship between technical violations and criminal activity, self-report data are critical.

METHOD

Participants

A sample of 126 offenders beginning a sentence of probation were interviewed shortly after they began probation in one of three probation districts in northern Virginia. Of these, 107 (85 percent) were interviewed a second time, approximately 6 to 8 months after the first interview.

Sample Selection

The sample was selected from case-opening records provided by three probation districts in northern Virginia. We attempted to contact and interview all offenders convicted of a felony offense and sentenced to a term of probation by the circuit courts if they met the following criteria. First, they had to be supervised at levels that required them to meet with their PO at least once per quarter at the start of probation. Offenders were excluded if they

were on administrative supervision, or were required to spend time in a halfway house or in a treatment facility at the beginning of probation. Subjects were excluded from the eligible pool if they were identified by interviewers or the probation district as non–English speakers, or if they resided outside the identified areas or in another state.

All offenders were interviewed within the first 2 months of the current probation sentence. Therefore, a case was not considered eligible if the researchers received the case-opening information from the probation districts after the offender had completed 2 months on probation.

To protect the confidentiality of the subjects, we did not inform the probation districts about which offenders participated in the research. Furthermore, we neither interviewed offenders nor contacted them from the probation office, because we wanted them to view us as completely separate from the probation agents (as we were). This was an attempt to optimize their willingness to be truthful in the interviews. In the informed consent, we did ask them for permission to gather information from their probation records and official criminal history.

From September 16, 1994 to March 31, 1996, 297 probationers were identified as eligible for the study. We were unable to contact 126 (42 percent) of these probationers because the addresses were incomplete or the phone numbers were unavailable. Of the remaining 171 who were contacted, 45 (26 percent) either refused to participate in the study or failed to show for any scheduled interviews. The remaining 74 percent were interviewed at time 1. We were able to interview 107 (85 percent) of these a second time.

Because we could not contact a large number of the offenders who began a sentence of probation, we think it is important to recognize that generalizing our results to all probationers would be problematic. Most likely, the offenders whom we could not contact are different from the others in unmeasurable ways. For example, the difficulty in contacting them by phone and by mail may indicate that they are homeless or that they cannot afford a phone. We were able to obtain some information from the case-opening forms (public information) to compare those whom we interviewed with those whom we could not contact and those who refused to participate. There were no significant differences in age, gender, offense, district, supervision level, risk, or need between the final sample (those interviewed twice) and the following three groups: (1) those who completed the second interview, (2) those who could not be contacted, and (3) those who refused to participate when we contacted them. The only significant differences between those interviewed twice and the others were racial. There were proportionately more White and other races and fewer African Americans interviewed in comparison to those who could not be contacted or who refused to participate.

Procedure

Probationer interviews. Once we received the case-opening information on probationers, a letter was sent to the probationers asking them to participate in the study. The letters gave a short description of the study and asked probationers to call the researcher at the university if they were willing to participate in the research project. They were told that they would be interviewed twice, and that they would receive $25 at the end of each interview.[1] When they contacted the researcher, the purpose of the project was explained, and if they agreed to participate, a meeting was scheduled. If, after the letter was sent, the probationer did not call, the researchers attempted to make contact by phone. In either case, if the probationer refused to participate, the case was closed and there was no further contact.

Once the probationer agreed to participate, an interview was scheduled at a local restaurant at a time and place convenient to the probationer. The first interview took place within the second month of probation (time 1). To begin the interview, the researcher described the nature of the research project and requested the probationer to sign a voluntary consent form. If consent was obtained, the interview would begin.

The first interview gathered demographic and personal history information, as well as detailed information on drug use and crime patterns. The probationer was asked about lifestyle and criminal activities during the year before arrest and up until this term of probation began. A monthly crime calendar, similar to the one used by Horney and Marshall (1991, 1992), helped to establish a frame of reference and give detailed information about monthly activities.

Six months after the completion of the first interview, probationers were contacted to schedule a second interview (time 2). The second interviews took place after the probationers had been on probation for approximately 8 months. The time frame covered by the second interview was the period from the beginning of probation until the interview (approximately 8 months; *SD* = 1.65) after the offender started his or her probation supervision. Detailed information on the type and frequency of criminal activity and violations of technical conditions of supervision was collected using a monthly crime and technical violation calendar. Community adjustment data, such as job status, drug and alcohol use, and residential stability, were collected. If a probationer was incarcerated at the time of the second interview, the interview was conducted at the institution, and a money order for $25 was deposited in the probationer's account at the institution. Twelve of the 107 time 2 interviews were conducted in institutions—11 in local jails and 1 in the state boot camp.

Probation agents in the districts were not aware of which offenders were participating in the study unless the probationers told the agents.

Self-report data. At the first interview, offenders were asked questions on demographics (age, race/ethnicity, whom they lived with, marital status, length of time in the local area, years of school completed, housing moves in the past 2 years, whether they were in an exclusive relationship but not married, and whether they had children), criminal history (age at first arrest, age at first involvement in criminal activities), and criminal justice system experience (number of previous arrests, times in jail or prison, times revoked and whether they had spent time in a juvenile facility). In order to measure the extent of their drug or alcohol problems, they were asked a series of six questions indicating possible drug or alcohol abuse problems (e.g., "Did your [wife/husband, girlfriend/boyfriend], relative, or close friend threaten to break their relationship with you because of your drinking?" "Did the police, a doctor, or people at work warn you about drug use and urge you to cut down or quit?"). The six items were used to form two summated scales indicating the extent of their problems that were related to drug or alcohol use or abuse. The coefficient alphas were .77 for the alcohol scale and .85 for the drug problems scale (see appendix for all items).

Detailed life calendars were used to collect data on lifestyle and criminal activities. The first interview focused on these activities during the year before the arrest for the current sentence of probation. We began by asking the offenders to tell us their lifestyle activities for each month, including the following: whether they worked; whether they attended school; whether they lived with a significant other (wife or live-in); whether they used illegal drugs; whether they drank heavily, got drunk often, or had a drinking problem; whether they attended treatment for drug or alcohol abuse; if they had attended treatment, what type of treatment; whether they had attended other types of counseling (non–drug and alcohol related); and whether their urine had been tested for illegal drug use. We asked women if they had been beaten by their spouse or partner and, if yes, the frequency of the beatings, and we asked them whether they had been forced to have sex when they did not want to.

Following the lifestyle calendar questions, we asked the probationers about their monthly criminal activities (this procedure is similar to that used by Horney and Marshall [1991]). For each month, we asked them if they had committed any burglaries, thefts, robberies, assaults, forgeries/frauds, or if they had dealt drugs. We defined each crime before they responded (see appendix for details on the wording of the definitions). After asking them if they had committed any crimes in a given month, we asked them how many of that type of crime they had committed. In order to find the exact number of

crimes committed each month by an offender, we asked a series of questions that enabled us to help the offender come up with a reasonable estimate. If offenders responded affirmatively to committing a crime (e.g., assault) in the specific month identified (e.g., December), we asked if they had committed 1 to 10 of the crimes or more than 10 of the crimes. If the response was less than 10, we asked them the specific number (e.g., two assaults). If they reported more than 10, we helped them to remember the specific number by asking a series of questions to help them remember exactly how many crimes they committed each month (these questions are identical to those used by Horney and Marshall [1991]). This procedure permitted us to identify gradually the exact number of the specific type of offenses the offender had committed during the month in question. The monthly rates could then be used to calculate a mean annualized self-report criminal-activity rate (lambda).

The second interview was identical to the first, with two exceptions. We did not repeat questions on demographics, criminal history, or experience with the criminal justice system before the arrest for the current offense because this information would not have changed from that collected during the first interview. We asked questions about monthly activities related to violations of the conditions of probation. For each month of probation, we asked the probationers if they had traveled outside the area without agent permission, owned a gun, missed drug and/or mental health treatment, paid court costs and/or restitution, and performed community service, in addition to the previously described questions on heavy drinking and drug use. We used the information on violations to form an index for violations based on these self-reported measures of violations of probation. (We obtained information on the conditions imposed from the official records, as described below.) The index for violations was based on self-reported measures of violations of probation, including heavy drinking, drug use, traveling outside of area without agent permission, owning a gun, missing drug and/or mental health treatment, not paying court costs and/or restitution, and not performing community service. The first four of these conditions applied to everyone at all times, but the remaining conditions did not. Therefore, we created a monthly violations index based on the number of violations reported by the probationer divided by the total number of conditions that applied to each individual. This was a measure of the proportion of the conditions of probation that the probationer self-reported violating each month.

Official record data. Data on gender, race, age, current offense, district, supervision level, risk, and need were collected from the case-opening files. Current offenses were classified into person, property, forgery/fraud, drugs, and other, based on Virginia Criminal Codes. The exceptions were that

embezzlement was removed from larceny and placed into the category of fraud, and drug frauds were removed from the drug offense category and categorized as fraud. This made the categories more consistent with the description of the crimes used in the self-reported survey.

At the end of 1 year of probation, official probation records were examined, and the following data were gathered on each participant: (1) a complete list of the types of probation conditions imposed, (2) adult and juvenile criminal history, (3) current offense type, (4) criminal activity during community supervision, (5) technical violations during community supervision, (6) revocations, (7) urine tests and results, (8) number and type of monthly contacts, (9) noncompliance with conditions of probation as recorded by the probation agent, and (10) PO responses to noncompliance. The outcome of revocation hearings was also documented.

In addition, 1 year or more after probation began, official criminal records were checked to document rearrests and convictions for each offender in the study. The data collected included dates, charges, and sentence. Official record checks were completed for 123 cases. Three cases could not be obtained because complete records could not be found in the National Crime Information Center (NCIC).

The official probation records and the self-report data were used to form indices for conditions of probation and for PO knowledge of violations. The conditions index was based on information obtained from PO records and from probationer self-reports. We added the urine screen level (ranging from 0 to 2, with 2 indicating more frequent screens) and the contact level (ranging from 0 to 3, with 3 indicating more frequent contacts) to the number of the following conditions required: drug treatment, mental health treatment, court costs, restitution, and community service. This gave us a monthly count of the number of conditions required of each probationer, ranging from 0 to 10. Thus, this index measured the intensity, severity, or intrusiveness of the supervision.

The PO knowledge index is a yes or no variable indicating whether the PO was aware of any probationer violations. This measure is limited to those measures of violations that could be clearly obtained from the PO files—arrests, failure to appear at PO meeting, and positive and unexcused urine screens.

PO responses to specific violations were somewhat difficult to ascertain from PO files, because there is no formal record of all violations and the response to these violations. Responses can range from very informal warnings to the more formal initiation of revocation. Complicating the matter further, the PO may respond to several things at once, often responding to an

accumulation of minor violations. We obtained these responses by reading through PO logs, which varied in the completeness of the information provided. Keeping these limitations in mind, we essentially kept a month-to-month record of PO responses, noting the type of response (initiation of revocation, increased control, increased treatment, or warning) and what violation(s) the response was for. Although it is difficult to link specific responses to the exact violation, theoretically, the PO response is expected to have an effect on the probationer's behavior.

RESULTS

Comparison of Completers to Noncompleters

We were able to complete a second interview with a large percentage of those who we interviewed at time 1 (85 percent). However, we were concerned that there may be differences between those who consented to both interviews and those who consented to only the first interview. Therefore, we compared the two groups on a large number of variables, including demographics, criminal history, and monthly experiences. Overall, there are few differences between the two groups, except in a few criminal history measures. According to their past history, those who did not appear for the second interview may have been at a somewhat higher risk for criminal activity.[2]

Characteristics of Probationers Interviewed at Time 1

As shown in Table 1, on average, probationers were 31 years old, African American, male, and convicted of drug or property offenses. Most lived with family, and although they were not married, many were in exclusive relationships (44 percent) and had children (47 percent). Most had held a job for about 4 years at some time in their life, and they most frequently worked as laborers. They had completed 12 years of school, and 87 percent provided the majority or all of their own financial support. They had lived approximately 19 years in the area. Almost half had moved in the past 2 years.

They reported first being involved in crime at around age 19 and their age at first arrest at age 22. Twenty-two percent had spent time in a juvenile facility. They had been arrested approximately five times.

Overall, the probationers reported low levels of alcohol and drug problems. Using the six-item scale to measure such problems, the average score was less than 1 for alcohol problems and 1.3 for drug problems. However, 28

TABLE 1: Characteristics of Probationers Interviewed at Time 1 (*N* = 126)

Age	
M (*SD*)	31.1 (9.54)
Gender (%)	
Males	76.2
Race (%)	
White	31.0
Non-White	69.0
Current offense (%)	
Person	12.7
Property	27.8
Fraud	15.1
Drugs	39.7
Other	4.8
Lived with family (%)	
Yes	73.0
Married (%)	
Yes	11.9
Exclusive relationship (%)	
Yes	44.1
Children (%)	
Yes	46.8
Years of school completed	
M (*SD*)	12.0 (2.0)
Financially self-supported (%)	
Yes	87.2
Years in the area	
M (*SD*)	18.8 (13.0)
Alcohol problems (scale = 1 to 6)	
M (*SD*)	.63 (1.25)
Drug problems (scale = 1 to 6)	
M (*SD*)	1.3 (1.80)
Used illegal drugs (%)	
Yes	68.8
Criminal history	
Age first involved in crime *M* (*SD*)	19.1 (8.02)
Age at first arrest *M* (*SD*)	22.3 (8.31)
Spent time in juvenile facility, percentage yes	20.6
Number of times arrested *M* (*SD*)	4.8 (5.39)
Number of times in jail *M* (*SD*)	1.6 (2.63)
Number of times in prison *M* (*SD*)	.5 (.94)
Number of times parole revoked *M* (*SD*)	.5 (.85)

percent responded yes to the question that asked them if they had drunk heavily, got drunk often, or had a drinking problem in the year before arrest, and 69 percent reported using some type of illegal drug during that time.

Comparison of Prearrest Period to Probation Period

We examined the self-reported monthly activities of the probationers during the year before the current arrest and during probation. For this section, we looked only at the 107 probationers interviewed at both time 1 and time 2. It is important to remember that the time periods are different for these two interviews. In the first interview, we questioned the probationers about the year before arrest. The second interview was conducted about 6 to 8 months after the probationers began the probation, and it focused on the months of probation. In many cases, the responses are similar. For example, 49 percent lived with a significant other before probation, and 39 percent lived with a significant other during the first 8 months of probation.

However, there were some differences. The number who used illicit drugs or who drank heavily declined from the prearrest period to the probation period. Approximately 25 percent said that they drank heavily, got drunk often, or had a drinking problem in the prearrest period, whereas only 10.3 percent agreed with this statement during probation. There was also a decline in those who reported using illegal drugs (from 69 percent to 27 percent). The smaller number of offenders who continued to drink heavily or use drugs did so for approximately the same amount of time when they were in the community. In comparison to the year before arrest, the offenders reported being tested for drug use more frequently during probation, and a higher percentage were tested.

When they were on probation, there was an increase in the number who participated in substance abuse treatment and in the percentage of months that they were in treatment. Most frequently, they attended Narcotics Anonymous (NA), Alcoholics Anonymous (AA) or group treatment. In addition, a higher percentage attended other types of counseling while they were on probation. In comparison to the year before probation, fewer of the women on probation reported being beaten by their spouse or partner, and of those who were beaten, the frequency of the beatings declined. None of them reported being forced to have sex during the time on probation.

In summary, it appears that probation reduces the number of offenders who continue with high-risk behaviors (heavy drinking and illegal drug use). During probation, the probationers are more apt to be in treatment, and women are much less likely to be beaten or raped.

Self-Reported Criminal Activities

Subjects were asked if they committed any of six crimes (burglary, theft, robbery, assault, drugs, and forgery/fraud). If they reported having done any

TABLE 2: Self-Reported Criminal Activities in Year before Current Arrest and while on Probation

Criminal Activity	*Time 1 (*n *= 107)*	*Time 2 (*n *= 107)*
Burglary, percentage yes (*n*)	6.5 (7)	.9 (1)
Mean percentage of street time active	36.3	25.0
Average number per month *M* (*SD*)	5.6 (13.85)	.3
Annualized rate *M* (*SD*)	67.3 (166.15)	3.0
Theft, percentage yes (*n*)	18.7 (20)	1.9 (2)
Mean percentage of street time active	49.2	25.0
Average number per month *M* (*SD*)	3.6 (5.37)	.9 (.53)
Annualized rate *M* (*SD*)	43.0 (64.45)	10.5 (6.36)
Forgery, percentage yes (*n*)	15.0 (16)	2.8 (3)
Mean percentage of street time active	27.0	24.1
Average number per month *M* (*SD*)	20.9 (60.09)	.6 (.43)
Annualized rate *M* (*SD*)	251.1 (721.03)	7.8 (9.33)
Robbery, percentage yes (*n*)	8.4 (9)	.9 (1)
Mean percentage of street time active	32.9	25.0
Average number per month *M* (*SD*)	1.2 (2.20)	1.3
Annualized rate *M* (*SD*)	13.8 (26.34)	15.0
Assault, percentage yes (*n*)	28.0 (30)	14.0 (15)
Mean percentage of street time active	27.3	20.0
Average number per month *M* (*SD*)	1.4 (4.84)	.3
Annualized rate *M* (*SD*)	16.5 (58.12)	3.2 (3.03)
Drug Dealing, percentage yes (*n*)	37.4 (40)	10.3 (11)
Mean percentage of street time active	66.2	65.6
Average number per month *M* (*SD*)	83.6 (218.15)	34.0[a]
Annualized rate *M* (*SD*)	1,003.3 (2,617.8)	408.0 (666.63)[a]
Any Crime, percentage yes (*n*)	67.3 (72)	20.6 (22)
Mean percentage of street time active	52.5	44.5
Average number per month *M* (*SD*)	53.5 (173.18)	16.6 (41.02)
Annualized rate *M* (*SD*)	641.5 (2,078.14)	199.5 (492.24)[a]

a. One case was omitted due to an extremely high rate of offending (2,800 deals per month and 33,600 deals per year).

of the crimes, follow-up questions asked them the number of crimes that they committed during each of the street months. Table 2 displays the self-reported participation in each of the six crimes during the year before arrest and while on probation. For those who committed the crime, the table shows the percentage of the street months that they were actively committing the crime, the average number of crimes that they committed per month, and the average number of crimes committed per year (an annualized rate or lambda).

As is obvious from the table, the number of participants declined after they were on probation. Furthermore, for those who continued, the annualized rate

or frequency of these crimes was reduced. For example, 6.5 percent ($n = 7$) of the subjects admitted to committing burglaries during the year before probation at a rate of 67.3 per year. In comparison, only .9 percent ($n = 1$) reported committing burglaries while on probation. In all cases, the number self-reporting the crime declined from before probation to probation, and, for those who did commit the crime, the frequency of committing the crime declined (annualized rate).

Because there were so few burglars, we combined burglary and theft into one category of property crimes for many of our later analyses. Similarly, we combined assault and robbery into a category of person crimes. Thus, for many of the analyses, we examined the four following types of crimes: property, person, forgery/fraud, and drug dealing.

Factors Associated with Criminal Activities

To examine the factors associated with criminal activity and the impact of probation, we conducted a series of logistic regressions using the calendar self-report data.[3] The first analysis examined whether the probationer committed any of the six crimes (assault, robbery, burglary, theft, forgery/ fraud, and drug dealing). The independent variables included were age, gender, monthly measures of work, school, living with a significant other, drug use, alcohol use (drank often), month number, a dummy variable for probation (yes or no), and the interaction of probation and month number. The month numbers were 1 to 12 for each of the months during the year before the month of arrest and for the first 12 months of probation. The month of arrest was not included. Because of the inclusion of the interaction term, the coefficient for month number captures only the year before arrest and not the 12-month period of probation. In contrast, the coefficient for the interaction of probation and month number captures only the probation period. As noted, the calendar data span the 12 months before arrest and the first 12 months of probation, and thus each individual in the sample can contribute up to 24 months of data. We did not include data for an individual during months in which the individual was locked up in jail or prison. The analyses are based on 2,091 monthly self-report records from 106 probationers.

When we regressed whether the probationer committed any of the six crimes on the independent variables listed previously, the coefficient for the interaction of probation and month number was negative. This means that, during the period of probation, criminal activity declines as time goes on, but this effect is not significant. The coefficient for month number was positive, meaning that, during the year before arrest, offending increased with time, but this coefficient is not significant. This indicates that there was no

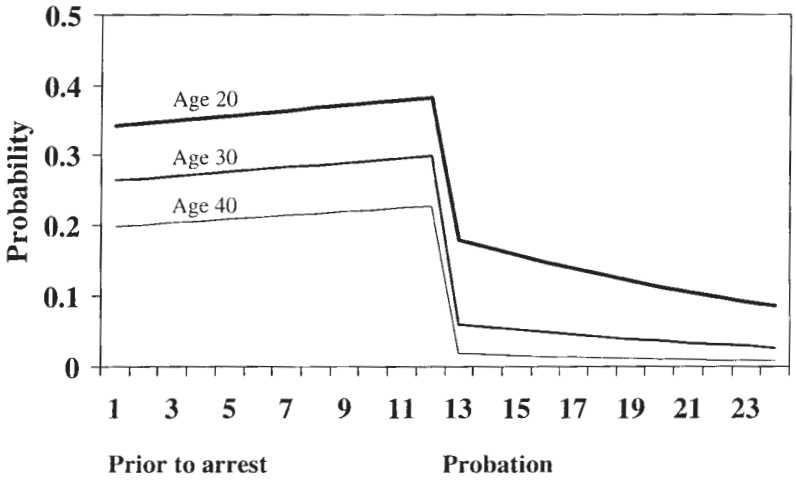

Figure 1: Probability of Committing any Offense by Age—Based on Self-Reported Criminal Activities

difference between the months before arrest and the months after probation, and that there was no significant change in criminal activities as a function of month. Probation was significant. There was a significant decline in self-reported criminal activity after probation began. In addition, in the months when these individuals were attending school, using drugs, or drinking often, they committed more crimes. As compared to females and older offenders, males and younger offenders committed more crimes.

Our examinations of interactions revealed a significant probation by age interaction. When this interaction was entered into the analysis, the probation effect became nonsignificant. A graph of this analysis indicated that the effect was due to the differences in the impact of probation depending on age. Although probation appeared to significantly reduce criminal activities for older offenders, there was much less impact on the younger offenders. As shown in Figure 1, although the criminal activities of all age groups declined, the drop from the prearrest period to the probation period was less for the 20-year-olds when compared to those for the 40-year-olds.

We used a similar model to examine each separate category of criminal activity (person, property, drug dealing, forgery/fraud). In interpreting these analyses, it should be kept in mind that the limited number of self-reported offenses limits the power to detect differences. As shown in Table 3, there are a large number of differences in the analyses depending on what crimes are

TABLE 3: Results of Logistic Regressions Examining Effects of Monthly Activities and Probation on Self-Reported Criminal Activities (*N* = 2,091 monthly records from 106 individuals)

	All Crimes		*Person (assault/robbery)*		*Property (burglary/theft)*		*Forgery/Fraud*		*Drug Dealing*	
Variables	β	SE	β	SE	β	SE	β	SE	β	SE
Work	–.179	.143	–.166	.221	–.462	.255	1.620*	.447	–.527*	.158
School	.655*	.188	.310	.255	–.411	.382	.322	.496	.609*	.209
Significant other	.089	.140	–.094	.236	–.342	.254	–1.345*	.380	.249	.158
Drug use	1.976*	.145	.127	.253	2.036*	.271	.285	.326	2.557*	.173
Alcohol	1.190*	.180	.742*	.256	1.676*	.254	1.056*	.417	.440*	.189
Gender	.448*	.170	.813*	.371	.300	.350	–1.855*	.339	1.206*	.220
Age	–.038*	.009	–.099*	.017	–.066*	.016	.074*	.016	–.072*	.010
Month number	.016	.020	.011	.031	.006	.034	–.044	.044	.014	.022
Probation	.905	.739	–.759	.514	–3.041*	1.209	4.541	2.497	–1.530*	.391
Month × Probation	–.093	.062	–.110	.100	–.012	.238	–.1501	.225	–.074	.073
Probation × Age	–.084*	.026					–.206*	.092		

*$p < .05$.

being examined. The factors associated with high rates of criminal offending may be very different depending on the type of crime examined.

When the analyses are compared, there are some differences between them. The interaction between age and probation was only significant for forgery/fraud offenses. Once the interaction term was dropped from the model, the age effect was significant in all of the analyses. Older offenders were significantly less likely to commit person, property, and dealing offenses, but significantly more likely to commit forgery. Being in school was only a significant predictor for drug dealing. Those in school were significantly more likely to be involved in dealing. Probation significantly reduced participation in property and dealing offenses, but not participation in person or forgery offenses.

Official Records: Probation Agent Logs and Criminal History Records

Probation agent logs. Probation agents were required by the state agency to record contacts with the probationer, including type of contact and date. According to these records, the probationers made approximately one office visit, and they were in contact with their PO about once each month during the first year of probation. There were many fewer home visits, employment contacts, and collateral contacts. Approximately 14 percent were jailed sometime during the year. A little less than 13 percent spent time in the day-reporting center, whereas only 6 percent spent time in an inpatient treatment program. During the year, 5.5 percent were listed as absconders, 6.8 percent were transferred out of the districts, and 10.4 percent of the cases were closed.

In answer to the question of what types of technical conditions are imposed, we found the following three basic types of conditions: (1) financial and community service conditions that are set by the sentencing court, (2) special conditions regarding treatment and drug screening that may be set by the courts or probation department, and (3) standard conditions such as travel and gun possession restrictions that apply to all probationers. Most of the probationers, 96 percent, had at least one type of financial obligation to the court. The most common financial condition was court costs, with 92 percent of the probationers being required to pay court costs.

POs monitor compliance with conditions in a variety of ways. Drug use is monitored with urine screens. Employment, treatment, and new arrests are monitored primarily through telephone contacts with the appropriate agencies and through personal communications with the probationer. Employed probationers are required to provide periodic verifications of employment by

submitting copies of pay stubs. Probationers generally make payments on financial conditions directly to the court, so POs must contact the court to monitor compliance with these conditions.

A number of sanctions, ranging from no response to an initiation of revocation, are available to POs to punish noncompliance with conditions of probation. POs are accorded a great deal of discretion in imposing sanctions, with the idea that individual circumstances are important in determining the most appropriate sanction. Sanctions include no response, review of conditions and/or warning of further action, increased level of supervision, official reprimand, referral to day-reporting center, drug treatment or drug education referral, anger management, community service hours, home electronic monitoring, boot camp, or an initiation of revocation proceedings.

Official criminal history records. In the year before the current arrest, the official records indicated that 38.8 percent were arrested, and that those who were arrested were arrested 1.5 times. Fewer were rearrested in the year of probation (28.6 percent), but those who were arrested were arrested 1.8 times. In comparing the type of arrests during the year before probation to the year of probation, there were few obvious differences in the types of crimes, except that there may be fewer arrests for theft and more for robbery or assault.

Similar to arrests, there was a reduction in the percentage of people convicted of crimes when the year before arrest (27.6) was compared to the year after probation (15.3). The number of convictions for those convicted of any crime was a little lower in the year prior (.74 before current arrest and 1.3 in year of probation).

Taking into consideration the current arrest and any other arrests during the year prior to arrest, these offenders were arrested for 2.1 percent of the person offenses that they self-reported committing. We calculated this number by dividing the total number of arrests by the mean annualized self-report criminal activity (lambda or the number of crimes committed per year). The resulting proportion represents the proportion of the crimes that resulted in arrests. For property, forgery/fraud, and drug dealing, 2.2 percent, .09 percent, and .07 percent of the crimes resulted in an arrest, respectively. Even fewer crimes resulted in convictions. For person, property, forgery/fraud, and drug dealing, only 1.5 percent, 2.0 percent, .8 percent, and .06 percent resulted in convictions, respectively.

During probation, far fewer of the probationers reported committing crimes, and the annualized rate of offending was much lower for those who did commit the offenses. A higher proportion of arrests per crime was also reported. For example, 6.8 percent, 11.1 percent, and .04 percent of the

person, property, and drug dealing offenses resulted in arrests, respectively. None of the probationers was arrested for forgery/fraud in the first year of probation.

Association between Violations, Conditions, PO Knowledge, and PO Response and Crime

We were interested in examining the effects of violations of probation, the number of conditions imposed, and PO activity on self-reported criminal activity. Theoretically, according to MacKenzie and Souryal's (1997) agent-response model, conditions of probation are designed to reduce high-risk behaviors and the associated criminal activities of offenders. However, as their model proposes, the effectiveness of these conditions is dependent on whether the agent knows of the high-risk behavior and responds to it. From this perspective, we would expect high-risk behaviors to be associated with criminal activity, and that increasing the conditions of probation should increase the knowledge the agent has about the probationers, and responses to violations should be associated, in turn, with reductions in high-risk behaviors and criminal activity. For this analysis, we used the indices of self-reported violations[4] (viol), conditions of probation[5] (cond), and PO knowledge of violations (know). As previously described, the three indices were monthly measures of self-reported violations of probation, conditions of probation, and PO knowledge of probationer violations, respectively. PO response (resp) was included in the model as a dummy variable indicating whether there was a response of some type in that month.

We estimated a causal model in Linear Structural Relationships (LISREL) using maximum likelihood estimation. The analysis is based on 6 months of data, beginning with data from the first month of probation. The model was estimated using pairwise deletion. Doing so prevented the loss of subjects, who at some time during the 6-month period examined, were locked up in jail or prison. The specification and standardized results of the model are shown in Figure 2. We started with a very simple path model containing only the stability effects for self-reported crime (crime), violations of probation (viol), and conditions of probation (cond). We then freed additional paths only when we believed that there was a theoretical reason to do so, or when the modification indices produced by LISREL gave us reason to believe that we could substantially improve the fit of our model by estimating the additional paths. The final model displayed in the figure represents the model that best fits the data.

The findings reveal that there is no evidence that additional responses by POs, above the original conditions of probation, have any impact on either

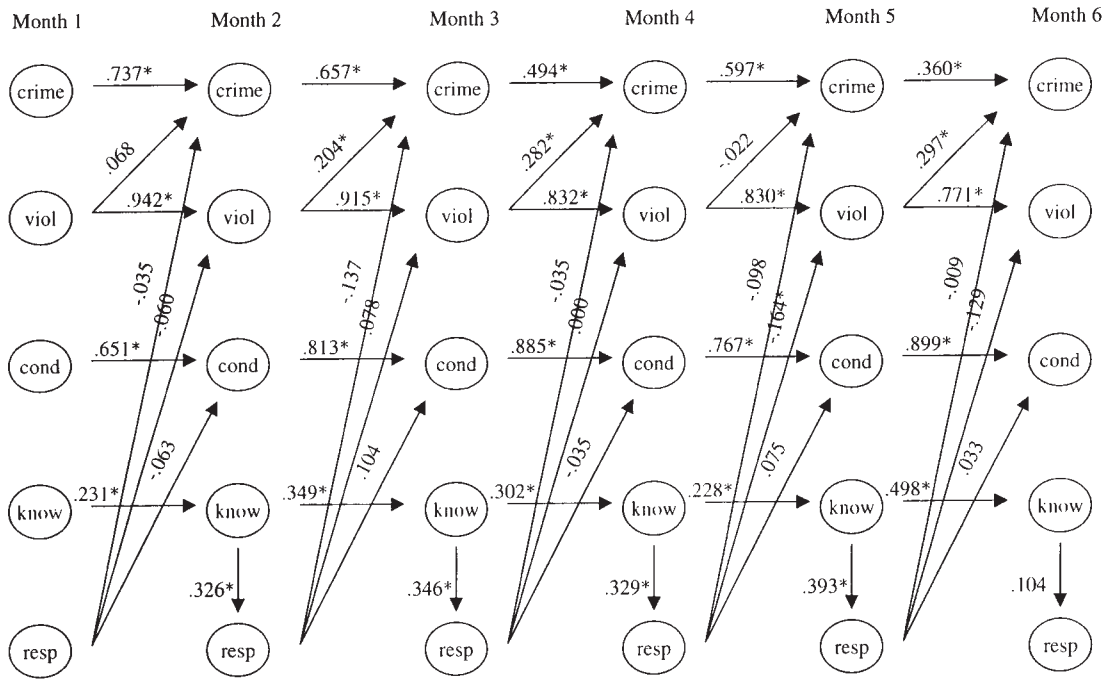

Figure 2: Linear Structural Relationships (LISREL) Model Examining Effects of Violations (viol), Probation Conditions (cond), Probation Officer (PO) Knowledge of Violations (know), and PO Response (resp) on Self-Reported Criminal Activities (crime) for the First 6 Months of Probation

*$p < .05$.

criminal or violation behaviors. The effect of PO response on both crime and violations is, for the most part, insignificant. Similarly, responses have no impact on conditions of probation. Criminal activity appears to be predicted solely by past criminal behavior and by involvement in violation behavior. As one would expect, the stability effects for crime, violation behavior, conditions, and knowledge are all positive and significant, as are nearly all of the paths from PO knowledge to PO response.

To further examine the relationship between criminal activities, violations, and PO response, we ran two regressions that looked at (1) the effect of crime and PO response in the prior month ($t-1$) to crime in the current month (t), and (2) the effect of violations and PO response in the prior month to violations in the current month. The results showed that crime_{t-1} was significantly related to crime_t, and $\text{violation behavior}_{t-1}$ was significantly related to $\text{violation behavior}_t$. However, in neither instance was PO response_{t-1} related to those factors. This supports the findings in the previous analysis that PO response has no impact on self-reported crime or violation behaviors.[6]

DISCUSSION

It is important to recognize the difficulty of generalizing this research to all probationers, because we were unable to contact many of those who were in our original sample. However, on the positive side, on the demographics characteristics available for comparison, we did not find many differences between those we interviewed and those we did not. Furthermore, we were able to find and complete a second interview with 85 percent of those who did agree to participate in the first interview.

Perhaps the most important finding in this study is the strong impact that probation had on the self-reported criminal activities of these offenders. In comparison to the prearrest period, there were fewer offenders during probation who committed crimes, and both the annualized rate of criminal activity for these offenders and the proportion of months when offenders committed crimes declined. However, the effectiveness of probation in reducing criminal activities differed depending on the age of the probationer. Probation appears to be more effective for older offenders. Our examination of separate crime types suggests that the crime reduction effect of probation was mainly a result of its effect on property and dealing crimes. Probation was not significantly associated with a reduction in person or forgery/fraud offenses.

The preprobation participation rates and lambdas for the criminal activities in this study are comparable to the rates found in other studies using similar methodology. For example, for theft, assault, and robbery, English (1993

found 19.9 percent, 27.8 percent, and 11.7 percent, respectively, of the men admitting to participating in the crimes, and the average lambdas were 76.7, 18.3, and 13.7, respectively. Horney and Marshall (1991) found lambdas of 117.2 for thefts and 24.9 for robbery for the prison inmates in their study. For theft, assault, and robbery, we found participation rates of 18.7 percent, 28.0 percent, and 8.4 percent, and lambdas of 43, 16.5, and 13.8, respectively. Considering that these data represent different jurisdictions and populations (both English and Horney and Marshall studied men sentenced to prison), these rates are reasonably similar (see also Spelman 1994; Zimring and Hawkins 1995). As might be expected, the lambdas for our probation sample were lower than the rates found in the studies of prison inmates.

We found a dramatic decline in both the participation rates and the lambdas when the offenders were on probation. The finding that probation has an impact on reducing criminal activity has important implications for research on incapacitation. Although many researchers examining the impact of incapacitation have considered differences in average offending rates in their estimates, they have not considered the impact of probation or other community alternatives in their calculations (Blumstein, Cohen, Roth, and Visher 1986; Nagin 1998; Spelman 1994; Visher 1986; Zimring and Hawkins 1995). Researchers examining the effect of incapacitation use the annualized crime rates (lambda) to estimate the crime reduction effect of prison. The current research suggests that these rates could differ depending on whether the estimates were based on rates during the time that the offenders were on probation. That is, as we have found, the rate of offending may be much lower when offenders are in the community on probation than when they are not on probation. Thus, the net effect of incapacitating offenders who would otherwise be on probation may be much lower than previously thought.

An important conclusion from this research is that probation may be more effective than previously thought. Prior research, particularly research on intensive supervision, has not provided strong support for the effectiveness of probation in reducing criminal activities (Petersilia 1998). In contrast, this research suggests that probation reduces the number of offenders who continue to commit crimes, the rate of offending for those who continue to offend, and high-risk behavior associated with criminal behavior.

Probation had an impact on reducing the high-risk behavior usually associated with criminal activity, such as heavy drinking, use of illegal drugs, and gun ownership. Furthermore, in comparison to the year before probation, fewer of the women were beaten or raped while they were on probation. In addition, a higher proportion of the offenders was in treatment during probation.

The relationship between the probationers' criminal activities and demographics, substance use, and monthly activities varied as a function of the type of criminal activity being discussed. Therefore, if we are to understand the criminal behavior of these offenders, we may have to examine each different type of criminal activity. The differences are particularly clear when forgery/fraud perpetrators are compared with drug dealers. Offenders committed more forgery/fraud when they were working, not living with a significant other, and if they were females and older. In contrast, offenders committed more drug deals if they were not working, were in school, were using drugs, and if they were males and younger. Drinking heavily was associated with both types of criminal activity.

Few of the self-reported crimes resulted in arrests. When we calculated the annualized rate of offending that resulted in arrest in the year before the current arrest, depending on the type of crime, we found that only .07 to 2.2 percent of the crimes resulted in an arrest. Even fewer of the crimes resulted in a conviction (.06 to 2.0 percent). Theoretically, these rates should be higher during probation because the probation agents are watching the probationers and will catch them when they commit crimes (Petersilia and Turner 1993). Although we did find that the rate increased slightly, it was not substantially higher than the arrest rates for self-reported crimes during the preprobation period. The arrest rates during probation varied from 0 (no arrests for the crime type) to 11.1 percent for arrests and convictions.

In this research, we were interested in examining the relationships between conditions of probation, violations of conditions, agent knowledge of violations, agent response, and the probationers' self-reported violations of conditions and criminal activity. We hypothesized that probation would be most effective in reducing criminal activities if intrusive or intensive conditions were imposed, and if the agent knew what the offender was doing and took some action against violations. We examined this proposal in an analysis using indices to measure (1) violations as self-reported by the probationers, (2) conditions of probation, (3) the knowledge that the PO had of violations, and (4) whether the agent responded. The causal model estimated in LISREL revealed that neither increasing the number of conditions, nor the type of information the agent obtains about the probationer, nor the response of the agent has any effect on the criminal activities or the violations of conditions. Thus, although probation itself may reduce criminal activity, there is little evidence that what happens during probation has any additional effect on either criminal activities or violations of conditions. On the positive side, the high-risk behaviors identified by the probation agencies are associated with criminal activity.

We do not know the mechanism by which probation reduces criminal activities. One possibility is that the arrest and sentence to probation is a precipitating event that causes dramatic changes in the lives of these individuals. Because the reduction in criminal activity is larger for older individuals, our findings may indicate support for Shover's (1985) finding that many offenders appear to age out of crime. According to Shover, offenders appear to reevaluate their lifestyle as they get older, get tired of crime, or begin to build new relationships or ties to work.

One way to interpret our results is to view probation as a precipitating event that initiates such changes. Research supports Sampson and Laub's (1993) proposal that "childhood pathways to crime and deviance can be significantly modified over the life course by adult social bonds" (p. 611). These bonds influence behavior over both long periods of the life course and in relation to local life circumstances (Horney et al. 1995). Future research should examine the specific changes that occur in an offender's life at the time of probation that are associated with this decline in criminal activity. If probation is a critical life event that increases ties with significant others or with work, there may be ways for the POs to do something that they are not doing now to increase the chance that the bonds or ties the offenders have formed during this period of probation will continue.

In contrast to a critical life event hypothesis for explaining the reduction in criminal activities during probation, is the possibility that the reduction is due to a deterrent effect of arrest and probation (Nagin 1998). Once caught and sentenced, offenders may reevaluate their chance of being caught, or they may believe that the increased surveillance from the probation agent may increase their chances of being caught.

The coefficients in the analysis indicate stability in criminal activity, violations, conditions, and knowledge. That is, criminal activities and violations of the conditions in one month predict criminal activity and violations in the subsequent month. Similarly, the conditions of probation and the knowledge the agent has about the probationer in one month predict the next month. Overall, it appears that there are few changes from month to month in what happens during probation, at least during the first 6 months. Criminal activity appears to be predicted solely by past criminal behavior and involvement in risky behavior. Those who continue to commit crimes or violate conditions continue to do so throughout the first 6 months of probation. Similarly, those who have more conditions imposed have these throughout the 6 months.

There is a relationship between the knowledge that the agent has about the probationer and the response. For example, if the urine test shows that the probationer has used illegal drugs, the agent responds in some manner.

However, there is no evidence that the agent's response has any effect on either the criminal activities of the offender or the violations of conditions of probation. Our records do not indicate that the agents had many choices about what to do when the probationers appeared to be having trouble or misbehaving. As with most probation agencies, there were limited options for the treatment of probationers. Evidence continues to accumulate on the effectiveness of treatment in reducing the recidivism of offenders (Gendreau 1996; MacKenzie 1997; MacKenzie and Hickman 1998; Palmer 1996). Thus, one step that probation agencies might take to increase the impact of probation is the initiation of more treatment options for dealing with misbehavior.

Misbehavior, as reflected in violations of conditions of probation, does predict criminal activity. Although this is neither strong nor consistent, it must be realized that this is over and above the variance accounted for by the high stability in criminal activities of the offenders. Thus, it appears that probation has successfully identified behaviors that are associated with criminal activities. Disappointingly, from the perspective of probation, neither the intrusiveness of the conditions, nor the knowledge that the agent obtains, nor the response that the agent makes has any additional impact on the criminal activities.

In conclusion, this study indicates that probation can be a viable method of short-term crime control. Probation reduces the number of offenders who commit crimes and the rate of offending for those who continue to offend. Disappointingly, we found no evidence that what occurs during probation has any further impact on offenders. On the positive side, behavior commonly identified as high risk and prohibited during probation is indeed associated with criminal activity. However, neither the addition of more intrusive conditions, nor the agent's knowledge of misbehavior, nor how the agent responds to misbehavior had any effect on the criminal activities or other misbehaviors of these probationers. If probation is going to be more effective in reducing criminal activities, it may be productive to increase the amount of information or change the type of information that the agent receives about probationers' misbehavior. Furthermore, although it appears that agents do respond when they receive information about misbehavior, there is little evidence that the response has any effect on changing the behavior of the offender. Thus, another potential crime control step may be to alter the response of the agent. For instance, agents might be required to respond more immediately to minor violations with some intermediate punishment short of revocation to increase the certainty of sanction without necessarily increasing the severity.

Overall, this research provides evidence that probation is effective in reducing criminal activities. However, some individuals continue to commit crimes during probation and to violate conditions of probation. Future research should examine how probation can have an impact on changing the behavior of these individuals.

APPENDIX

Drug and Alcohol Problems Scales

The following questions were asked first regarding alcohol and then repeated for drug use.

1. Did your (wife/husband, girlfriend/boyfriend), relative, or close friend threaten to break their relationship with you because of your drinking (drug use)?
2. Did the police, a doctor, or people at work warn you about drinking (drug use) and urge you to cut down or quit?
3. Did you take a drink (use drugs) first thing in the morning to get rid of a hangover or stop your hands from shaking?
4. Did you skip four or more meals in a row while drinking (using drugs)?
5. Were you afraid that you were an alcoholic (dependent on drugs)?
6. Did you attempt to cut down your alcohol (drug) use but were unable to do so, possibly after promising someone else you would cut down?

Criminal Activity Questions

1. During the street months on the calendar, did you do any burglaries? Count any time that you broke into a house or a business to take something.
2. During the street months on the calendar, did you do any thefts or boosting? That is, did you steal from a till or cash register, shop lift, or take someone's property without their knowledge? Include breaking into a car and stealing a car, truck, or motorcycle.
3. During the street months on the calendar, did you ever forge something, use a bad or stolen credit card, pass a bad check, do any frauds or swindles (illegal cons) of a person, a business, or the government? Include welfare and food stamp fraud.
4. During the street months on the calendar, did you do any robberies? That is, did you use force or the threat of force to take someone's property? (Used a gun, told someone that you had a gun, or threatened to beat them up if they did not

come across with the goods?) Include, for example, any time that you snatched a purse, jacked a car, robbed a store clerk or bank teller.
5. Even if no one was hurt, during the street months on the calendar, did you have a fist fight with someone, threaten someone with a weapon, shoot at someone, try to cut someone, or beat or strangle someone?
6. During the street months on the calendar, did you ever deal in drugs? That is, did you supply, hold, make, sell, smuggle, or move drugs?
7. You said you did burglaries during the street months on the calendar. In all, how many burglaries did you do? Remember to count any time you broke into a house or a business to take something. Do not include breaking into a car.

Follow-up Questions for Those Who Admitted to Committing the Offense

- You said that you took something or stole during the street months on the calendar. How many times did you take something or steal? Remember to count any time that you stole from a till or cash register, shop lifted, or took someone's property without their knowledge during the street months on the calendar. Responses can be either "11 or more" or "1 to 10."
- During which months did you do NOT steal?
- For those responding 1 to 10: You said you took something or stole [insert most recent month]. How times did you take something or steal in [insert most recent month]? [Continue on month to month basis.]
- For those responding 11 or more: You said you took something or stole during [insert most recent month]. How often did you steal or take something. Responses can include (1) Everyday or almost everyday? How many per day? How many days a week usually? (2) Several times a week? How many per week? (3) Every week or almost every week? How many per month? (4) Less than every week? How many per month?

NOTES

1. The $25 most likely encouraged some of the probationers to participate in the research, and this may have led to a larger number of poorer probationers participating in comparison to the more wealthy probationers. However, the researchers, in conjunction with the University Institutional Research Board, believed that this amount was not so large as to coerce anyone to participate.

2. Most of the time, we could not interview the offenders because we were unable to contact them or they had moved out of state. Several offenders refused or failed to show up for the interview and one died. We were able to conduct interviews with the probationers when they were in jail or prison. We compared the two groups on the following variables: age; gender; race; current offense; marital status; quality of marital/exclusive relationship; children; employment; commitment to job; school; financial support; housing stability; neighborhood problems; alcohol

and illicit drug use; substance abuse treatment; other counseling; stressful life events; criminal history; and monthly activities in the year before arrest including living with spouse or significant other, changing residence, attending school, employment, criminal justice system involvement, and owning or carrying a gun. The only significant differences found were in commitment to job, in commitment to drug or alcohol treatment in lifetime, and in two measures of criminal history (number of times in juvenile facility and number of times that parole was revoked).

3. As discussed in Allison (1984), this method may produce a downward bias in the estimated standard errors. Such bias will occur if there is an omitted, unobserved individual level trait that is constant over the period examined that affects the dependent variable. The implication of downwardly biased standard error estimates is that the explanatory variables that are observed as not significant truly are not significant, whereas those that are marginally significant may in fact be nonsignificant. There are alternative methods, including various adjustments to the estimated covariance matrix and hierarchical linear modeling, that make adjustments based on various untestable assumptions. Thus, there is no way of knowing if the alternative estimation methods are, in fact, any more accurate or just different. It is important to note that with the methods used here, although the standard error estimates may be biased, the estimated parameter values are not biased. For a more detailed discussion of these issues, see Allison (1984).

4. We examined the association between violations of conditions and criminal activities. Most of the offenders had standard conditions of probation, including prohibitions on drinking to excess and requirements to attend meetings with agents. Violations would include use of illegal drugs and involvement in criminal activities. Therefore, we included in the model the self-reported information indicative of violations (use of drugs, drinking heavily, traveling outside the area without agent permission, arrests, missing drug treatment or mental health treatment, violated curfew, and owning a gun), agent reports of failure to appear, positive urine screens, and unexcused absences for urine tests. The probation records were not sufficiently detailed to permit us to include monthly information on other violations. Self-reported arrests were considered a violation of the requirement to refrain from illegal activities. Criminal activity was more likely to occur in months when the probationers used drugs, drank heavily, were arrested, traveled outside the area, missed drug treatment, or had positive urine screens. There were no significant relationships between criminal activity and missing mental health treatment, curfew, failure to appear, or unexcused urine tests.

5. We examined the effects of conditions of probation on the self-reported criminal activities of the offenders. It is important to realize that these analyses focused only on whether the probationers had the condition, not whether they complied with the conditions. We controlled for age, gender, race, working, in school, living with spouse, living with significant other, drinking heavily, and drug use. Using the data from the probation officer (PO) records, we determined if the conditions of probation required restitution, court costs, community service, substance abuse treatment, or mental health counseling. The model included monthly data on whether the probationers were in day-reporting centers, had a urine screen, or had a person-to-person contact with the agent. We included monthly information on whether the agent had a collateral contact or had completed a record check. Collateral contacts include family, employment, and community contacts made by the PO. The results indicated that mental health counseling, day reporting, contact with the agent, and collateral contacts were significantly related to criminal activities. The criminal activities of the offenders were lower if they had mental health counseling as a condition of probation. In addition, the probationers were less likely to commit crimes during the months when they had personal contact with the agent and when they were assigned to the day-reporting center. However, collateral contacts were associated with a greater likelihood of committing crimes. We examined a lagged effect by using the monthly contacts, day-reporting center, urine

tests, and record checks from the month before to predict the next month's criminal activities. None of these was significant in the analysis, indicating that the effect of the day reporting and contacts are for the month that they occurred in and not for the following month.

6. We ran a logistic regression using the three index variables and PO response to examine their relationship to self-reported criminal activity. We used essentially the same variables used in the Linear Structural Relations (LISREL) model except for the PO knowledge index variable. In the LISREL model, PO knowledge was a dichotomous variable, but in this analysis, we used a measure based on the number of probationer violations of which the PO was aware divided by the total number of violations of which the PO could be aware. However, this measure used the same violations as the LISREL model—arrests, failures to appear at PO meetings, and positive and unexcused urine screens. We controlled for age, race, and gender. The results indicate that age, risk behaviors, and PO knowledge predicted criminal activity. Younger offenders were more active. High-risk behaviors and PO knowledge of violations were both associated with more activity that is criminal. PO response and the other individual types of responses were not significant.

REFERENCES

Allison, Paul D. 1984. *Event History Analysis: Regression for Longitudinal Event Data*. Beverly Hills, CA: Sage.

Blumstein, A., J. Cohen, J. Roth, and C. Visher. 1986. *Criminal Careers and "Career Criminals."* Washington, DC: National Academy Press.

Clear, T. R., P. M. Harris, and S.C. Baird. 1992. "Probationer Violations and Officer Response." *Journal of Criminal Justice* 20:1-12.

English, K. 1993. "Self-Reported Crime Rates of Women Prisoners." *Journal of Quantitative Criminology 9*:357-82.

Erwin, B. 1987. *Evaluation of Intensive Probation Supervision in Georgia*. Atlanta: Georgia Department of Corrections.

Gendreau, P. 1996. "The Principles of Effective Intervention with Offenders." Pp. 117-30 in *Choosing Correctional Options that Work: Defining the Demand and Evaluating the Supply*, edited by A. T. Harland. Thousand Oaks, CA: Sage.

Horney, J., and I. H. Marshall. 1991. "Measuring Lambda Through Self-Reports." *Criminology* 29:471-95.

Horney, J., and I. H. Marshall. 1992. "An Experimental Comparison of Two Self-Report Methods for Measuring Lambda." *Journal of Research in Crime and Delinquency* 29:102-121.

Horney, J., D. W. Osgood, and I. H. Marshall. 1995. "Criminal Careers in the Short Term: Intra-Individual Variability in Crime and Its Relation to Local Life Circumstances." *American Sociological Review* 60:655-73.

Langan, P. A., and M. A. Cunnif. 1992. *Recidivism of Felons on Probation, 1986-1990. Bureau of Justice Statistics Special Report.* Washington, DC: Department of Justice.

MacKenzie, D. L. 1997. "Criminal Justice and Crime Prevention." Pp. 9.1-9.61 in *Preventing Crime: What Works, What Doesn't, What's Promising*, edited by L. W. Sherman, D. Gottfredson, D. MacKenzie, J. Eck, P. Reuter, and S. Bushway. Washington, DC: National Institute of Justice, Department of Justice.

MacKenzie, D. L., and L. Hickman 1998. "What Works in Corrections?" (Unpublished report to the State of Washington Legislature Joint Audit and Review Committee).

MacKenzie, D. L., and C. Souryal. 1997. "Probationer Compliance with Conditions of Supervision." Pp. 352-59 in *Correctional Contexts: Contemporary and Classical Readings*, edited by J. W. Marquart and J. Sorensen. Los Angeles, CA: Roxbury Publishing Co.

Maguire, K., and A. L. Pastore, eds. 1997. *Sourcebook of Criminal Justice Statistics* [Online]. Available: http://www.albany.edu/sourcebook

Nagin, D. S. 1998. "Deterrence and Incapacitation." Pp. 345-68 in *The Handbook of Crime and Punishment*, edited by Michael Tonry. New York: Oxford University Press.

Palmer, T. 1996. "Programmatic and Nonprogrammatic Aspects of Successful Intervention." Pp. 131-82 in *Choosing Correctional Options that Work: Defining the Demand and Evaluating the Supply*, edited by A. T. Harland. Thousand Oaks, CA: Sage.

Parent, D. G., D. Wentworth, P. Burke, and B. Ney. 1992. *Responding to Probation and Parole Violations.* Unpublished report, Department of Justice, National Institute of Justice.

Petersilia, J. 1998. "Probation and Parole." Pp. 563-88 in *The Handbook of Crime and Punishment*, edited by Michael Tonry. New York: Oxford University Press.

Petersilia, J. 1985. "Probation and Felony Offenders." *National Institute of Justice Research in Brief*. Washington, DC: National Institute of Justice.

Petersilia, J., and S. Turner. 1990. *Intensive Supervision for High Risk Probationers: Findings from Three California Experiments*. Santa Monica, CA: RAND.

Petersilia, J., and S. Turner. 1993. *Evaluating Intensive Supervision Probation/Parole: Results of a Nationwide Experiment*. Washington, DC: National Institute of Justice.

Sampson, R. J., and J. H. Laub. 1993. *Crime in the Making: Pathways and Turning Points Through Life*. Cambridge, MA: Harvard University Press.

Shover, N. 1985. *Aging Criminals*. Beverly Hills, CA: Sage.

Spelman, W. 1994. *Criminal Incapacitation*. New York: Plenum Press.

Visher, C. 1986. "The RAND Inmate Survey: A Reanalysis." In *Criminal Careers and "Career Criminals,"* edited by A. Blumstein, J. Cohen, J. Roth, and C. Visher. Washington, DC: National Academy Press.

Whitehead, J. T. 1989. "The Effectiveness of Felony Probation: A Replication and Extension of Three Studies." Paper presented at the 1989 Annual Meeting of the American Society of Criminology, Boston.

Wright, R., S. H. Decker, A. K. Redfern, and D. L. Smith. 1992. "A Snowball's Chance in Hell: Doing Fieldwork with Active Residential Burglars." *Journal of Research in Crime and Delinquency* 29:148-61.

Zimring, F. E., and G. Hawkins. 1995. *Incapacitation: Penal Confinement and the Restraint of Crime*. New York: Oxford University Press.