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How Accurate Are Arrestees
in Reporting Their Criminal Justice Histories?:

Concordance and Accuracy of Self-Reports
Compared to Official Records

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Abstract

This analysis focuses upon the validity of arrestee self-reports of drug use and contacts with the criminal justice system. It is possible that the arrest event itself might lead to inaccurate self-report. The issue was examined using data from a supplement to the ADAM program that focused on policing. During the second half of 1999, interviews focusing on criminal activity, drug use and perceptions of policing were conducted with by 892 New York City arrestees. Policing study subjects gave informed consent for researchers to obtain their official criminal histories, which were acquired from the appropriate State agency as an anonymous data set. The nature and extent of discrepancies between the arrestees' self-reports and their official record information varied greatly depending upon the criminal justice system contact being measured. Policing subjects were highly likely to report whether they had been arrested, in jail, or in prison in their lifetime. However, they tended to deny arrests for serious crimes, specifically robbery, property, violent, and index crimes. Self-reports of illicit drug use were quite concordant with urine test results for substantial majorities of Policing subjects. While the accuracy and precision of arrestee self-reports varied from moderately high to poor, errors did not chiefly reflect attempts at concealment, as both over- and underreporting were generally similar in magnitude. We conclude arrestee self-reports continue to be valuable for criminological research, especially when documentation of the honesty of answers can be provided.

How Accurate Are Arrestees in Reporting Their Criminal Justice Histories?: Concordance and Accuracy of Self-Reports Compared to Official Records

A fundamental and continuing problem in sociology and criminology is assessing the validity and value of a respondent's self-reports on various phenomena of interest. This paper is primarily focused upon understanding the accuracy of offender self-reports about their contacts with the criminal justice system, with a secondary focus upon their self-reports of drug use. The official criminal histories and urinalysis test results of a sample of New York City arrestees are used to document the concordance and accuracy of their self-reports.

Background

Offender self-reports of prior criminal histories

Generally, criminological research uses data either from self-report surveys or from official records, but rarely from both sources. Many studies present information based entirely upon official criminal history data, but have no self-report information from offenders. Other studies rely solely on self-report data, ignoring the official record. Nevertheless, there is some research (Hindelang et al. 1981, Elliott and Huizinga 1986) which uses official records as a check on the accuracy of self-reported data. This work is often conducted using youthful samples, age cohorts (Farrington 1973), or prison inmates (Chaiken and Chaiken 1980).

Here, we only review work that has compared self-reports about criminal justice histories to an official record of some kind. Such research tends to be of two types. The first type has the explicit goal of assessing the validity of offender self-reports. This work involves analyzing the level of agreement between self-reports and official records. Some work examines concordance on a general level, while other work uses statistics such as kappa. The second type of research compares self-reports to official records as part of an overall check of data quality, usually in the

context of general research on criminal histories. Note that in both types of research occasionally focus on the impact of other variables (demographic, offense history, etc.) on the validity of offender's self-reports. Almost all prior studies proceed initially on the assumption that the official records are correct, although some come to conclude otherwise. Finally, as this research has been done almost exclusively on inmates or on youthful samples; thus, the findings may have limited applicability for other groups.

While touching on both types of research, our review below will focus primarily on the research that has addressed concordance, because it is most relevant to the analyses presented here. Further, while numerous studies have examined whether self-reports about criminal behavior in the community are located in official criminal records, this paper does not address that issue.

Validity of Offender Self-Reports

An early study by Wyner (1980) study examined an ex-addict population from a criminal justice-based treatment program. His research focused on response error, the difference between the self-report and the official record for a given variable, and was calculated by subtracting the number of arrests in the official record from the number self-reported. Thus, positive numbers indicate over reporting, while negative numbers demonstrate underreporting. Among the 79 individuals having official arrest records, Wyner found the mean number (8.96) of self-reported arrests was slightly lower than that in official records (9.25). With this small response error (-.29), the researcher concluded that the tendencies to over and underreport almost cancel each other out. Overall, the correlation between self-reports and official records was .66, which is moderate to high. Hindelang et al. (1981) examined the association between the self-reports and official records of a youthful sample, looking specifically what they called correlational validity;

namely, to what extent do measures of the same phenomenon provide similar information? The assumption is, if one uses a delinquency definition that is identical to that of the official measure, those official records can be used for validation. A key focus of this work addressed the differential validity of self-report by both race and sex. They found that no differences emerged by gender, however, important race differences were found. Specifically, blacks, males in particular, dramatically underreported involvement in certain criminal behaviors. Similar findings emerge in Huizinga and Elliott (1986) and Junger (1989).

Marquis (1981) used the data set from the Rand Inmate Study (Chaiken and Chaiken 1982) to explore the issue of response bias. While he examined both validity and reliability, the focus here is upon validity. Response bias is the difference between the self-report value and the official value, with the latter presumed to be a true value, so to speak. Marquis found a significant positive bias in the yes/no measure of past arrest for data from one of the three states examined; non-significant positive bias was found in the data from the other two states. For number of past arrests, Marquis found overall a net statistically significant positive bias in two states and a non-significant negative bias in one. Turning to reports on crimes actually committed (that is, whether and how often an inmate committed a specific crime type), Marquis found a positive bias for number of crimes done and negative one for yes-no accounts. These inmates were generally less likely to admit to an arrest, but when they did so, they tended to overstate the number of arrests experienced.

Bridges (1987) also deals with response error, using a more complex set of analyses. With data from the Philadelphia Birth Cohort Study, he examined response bias for 7 measures of offense activity, finding the bias in most cases to be significantly different than zero.

Specifically, information on the most recent offenses (self-reported last arrest) were the most

biased, as were number of arrests lifetime and age at first arrest. As for direction, the overall bias was positive. In the aggregate, the least serious offenders tended to have high positively biased scores, while the most serious offenders had negatively biased ones. The overall effect results in a net positive bias, since relatively fewer respondents were serious offenders. Somewhat pessimistically, Bridges concludes that the validity and reliability of self-report measures is poor, so poor as to cast doubt on their use.

Collins et al (1982) examined a randomly selected subset (N= 100) of persons in a drug treatment sample. They acquired 65 rap sheets and examined the extent of agreement between official records and self-reports. Comparisons were made for 4 offense groupings. The concordance rates overall were as follows: Attacks against persons - 72%; Property offenses - 34%; Prostitution - 84%; Drug-related - 53%. These rates increase (ranges are 77% - 96.8%) when the reference period is limited to the past year. This implies that memory errors and not deliberate distortion may be the reason for any inconsistencies. Further, they also found that overreporting of arrest were more common than underreporting.

In a more recent effort, Maxfield et al (2000) compared a sample of persons who were as children were abused with a matched non-abused group about their disclosure of criminal justice system involvement. Note that this is one of the few studies using a non-offender sample. The findings discussed herein are restricted to individuals who had at least one official arrest. Seventy-two percent (72%) of people who had an official arrest reported it in the self-report schedule - as they note, this is on the high end of the continuum. They further examined variations in self-report among different offense groups, finding the following results. Public order and drug crimes showed the highest rates of agreement between official and self-reported arrests in lifetime (83.1% and 86.3%), while those with the lowest rates of disclosure were rape

and prostitution. (20.0% and 26.1 %). The findings for violent and property crime were in the middle (54.5% and 60.4%). They noted that disclosure varied with the prevalence of offending in a given category. That is, the crimes with the highest prevalence rates (drugs, public order crimes) had the highest levels of disclosure.

Finally, Babinski et al (2001) looked at self-reports of arrests and official arrest records among a clinical sample of young adults with ADHD. They compared kappa coefficients for 12 different types of crimes for any variations in agreement rates among offenses. They found good to fair agreement for most crimes types, with kappas ranging from .45 to .62 (theft less than 50 dollars; theft greater than 50 dollars; burglary; drug related crimes, carrying weapon, robbery, and sex-related offenses (although standard errors were large for these last two.) The agreement rates were less than adequate for other offenses: disorderly conduct, vandalism, assault with a weapon; assault w/o a weapon, spousal violence. Interestingly, the agreement rates are not consistently linked to crime type, that is, low disclosure occurred both for serious and minor crimes. One important caveat to this study is the fact that the base rates for the behavior of interest were very small (for instance, while 66% correctly reported a robbery arrest, this involved only two subjects out of three with a robbery arrest record). Larger sample sizes of persons with official records for serious crimes are clearly needed.

Significantly, the current authors did not locate a single study in the published literature wherein respondents were interviewed about their criminal justice record shortly after arrest and/or booking and the official record was obtained. The current study appears to be the first such study conducted among arrestees.

Given the research just reviewed, generally high levels of agreement between self-reports and official records should be anticipated. Overreporting may occur for more minor offenders.

Admission of arrest in lifetime or in recent time periods may show higher agreement than the frequency of arrests. Persons with more criminal justice experience (e.g., been in jail or prison) may be more likely to report various criminal justice contacts. Individuals with more serious records or more extensive criminal histories may have higher levels of underreporting and inaccurate estimates of their official criminal records. Finally, following Collins et al. (1982), Maxfield et al. (2000) and Babinski et al (2001) there is likely to be widely different findings depending upon the specific offense types being compared.

Offender Self-Reports of Drug Use

Since many arrested persons tend to be regular users of illegal substances, a secondary issue is to document how self-reports of drug use correspond to urinalysis results. Here we summarize several previous studies that have addressed concordance. Various studies (Magura and Kang 1988; Harrison 1996, 1997; NIJ 2000, 2001) document that, overall, about half of the persons detected as positive by urinalysis self-report recent (past 2-4 days) use of cocaine/crack or heroin. The numbers for marijuana are somewhat higher, with about two-thirds of those testing positive self-reporting use in the past 30 days. Interestingly, a sizable proportion individuals overreport; that is, they self-report current marijuana use but are not detected as positive by urinalysis.

A summary (Liberty 2000) of 10 studies published between 1983-1999 found that, for heroin/opiates, the average percent agreement between self-report and urinalysis was 81% (ranging from 64%-92%); while the average denial rate for heroin across 22 studies is 48%). Mieczkowski (1990) found substantial underreporting of cocaine use with lesser rates for opiates and marijuana. In a more recent study of using ADAM program data, Lu, Taylor, Riley (2001) report an 83% agreement rate and 52% denial rate for crack consumption. The National

Treatment Improvement Evaluation Study (Gerstein et al. 1997) interviewed persons who entered and exited a variety of types of drug treatment programs located around the nation. Among the 2,566 subjects who completed follow-up interviews, NTIES found agreement rates of 91.5% for heroin, 82.5% for cocaine/crack, and 86.7% for marijuana; the denial rates were 45.0% for cocaine/crack, 41.3% for heroin, and 36.4% for marijuana.

In a major review comparing self-report versus urine tests for detecting illicit drug use, Maisto et al. (1990) conclude that "drug abusers' self-reports are reliable and accurate, but the data are more strikingly marked by wide variation in accuracy findings, and in the samples and procedures used to obtain them." Harrison (1997) notes that reports of lifetime drug use tend to be the most accurate, followed by past year and past month use reports. She concludes that current large-scale surveys of illicit drug use in general populations are probably valid, although substantial minorities of subjects may underreport. The validity of drug use reports from various sub-populations, such as arrestees, is still an open question, however. It is possible that the same factors that influence an arrestee's willingness to report his/her criminal history also influence willingness to report drug use. In particular, given the recent focus on the NYPD on drug-related offending, arrestees might be less likely to admit to drug use in general, or the use of certain substances, say marijuana, in particular.

The official criminal records

During the past 40 years, the criminal justice system has dramatically improved its systems for maintaining official criminal histories. While it is beyond the scope of this paper to review the many technological and database improvements occurring during the past 20 years, among the three most important involve: 1) digitized fingerprinting and retrieval of criminal records, 2) maintenance of state-level criminal history databases with thousands and millions of records, and

3) telecommunications capabilities which speed retrieval and delivery of criminal history information to criminal justice agency personnel within a state and across the United States.

With few exceptions, those arrested and arraigned for virtually any criminal event acquire an official criminal history. Such official records are stored in massive state-level databases that usually contain a given person's fingerprints and photograph(s), a unique criminal identification number, several unique personal identifying attributes (demographics and physical attributes), as well as computer code containing variables describing each of the events of arrest, dispositions, sentences, entry into jail, prison, or probation, etc. While some states have policies that mandate the sealing (or exclusion from rap sheets) of events in which the disposition was favorable to the defendant (e.g., not guilty verdict, fine, or adjudication in contemplation of dismissal), most arrests and related fingerprints are retained on state computer databases for indefinite periods of time. These criminal history databases also retain information about outstanding warrants, probation or parole status, and much other information.

For any given suspect, rap sheets are rapidly made available to police, courts, and other authorized law enforcement authorities across the USA. The length, nature, and severity of the rap sheet will often influence a prosecutor's bargaining decisions, as well as the types of penalties a judge may consider imposing. Moreover, the rap sheet constitutes a state imposed, official label of that an individual as a felon, robber, drug seller, etc. These are labels the person will never lose during a lifetime. The highly negative societal reaction against those officially labeled criminal means that a felony label may exclude such persons from many forms of employment, and also from other benefits (for instance, voting, welfare benefits, educational aid) otherwise available to citizens. For the purposes of this report, the authors assume that such

official records constitute a quite accurate account of a given person's contacts with the criminal justice system.

Limitations of offender self-report of criminal histories

A large scientific literature discusses many issues regarding the accuracy of self-reports among ordinary citizens regarding non-controversial topics. Some of the major problems affecting accuracy include memory fade and forward and backward telescoping of events. These factors are further influenced by variations in respondent characteristics, motivation, cognitive processing, and the attributes of the task at hand (that is, what the interviewer asks them to recall and report upon) (Liberty 2000).

Many offenders have had numerous arrests and hence have lengthy official criminal records. They may have arrests for a variety of different offense types (e.g., robbery, burglary, drug sales, assault), charged as felonies or misdemeanors, and a variety of dispositions for these charges.. Given the complexities of charges, pleas, and sentences, many offenders may be confused about important criminal justice distinctions, and about whether or not a given criminal justice event results in a permanent record of some sort. Thus, under the best of circumstances, some variance is expected in what offenders recall about their criminal history and what is actually present in their official criminal record.

Among criminal justice personnel (police, prosecution, courts, corrections, etc.) the standard presumption is that offenders lie or are deceitful, and will underreport prior criminal involvement. However, this is not the only potential source of error. Arrestees may also overreport, that is, they may claim a greater number of arrests, convictions, etc., than may be present in their official criminal histories. This could occur for several reasons: recall of out-of-jurisdiction (here outside of New York State) legal contacts, traffic stops, tickets, or station

house visits, for example. In fact, an offender's self-report of criminal justice history may actually be more complete than the official one, especially for minor offenses (Marquis 1981; Hindelang et al. 1981).

The many factors discussed above may influence the validity of arrestee self-report information in particular, especially in comparison with their official criminal record. When approached for interview at arrest, individuals may be unwilling or do not recall their criminal justice contacts. Given the increasing importance of arrestees as a data source, it is imperative that the validity of their self-reports be documented with considerable precision. In prior research involving drug treatment and criminal justice populations, considerable evidence has accumulated that individual self-reports of drug use, offending activity, and contacts with criminal justice agencies/institutions are quite valuable for understanding patterns of behavior. The central claim is that arrestee self-reports, when carefully interpreted, constitute a potentially valuable and source of information about that person's behavior.

The analyses described in this article will address several issues. First, we seek to determine how accurately arrestees report general information about their past criminal justice involvement, such as ever arrested, number of adult arrests, ever in jail, etc. Next the accuracy of reports of involvement in specific offenses is assessed. For example, among offenders with official records of, say, robbery, what proportion will self-report a robbery arrest? Finally, the concordance rates among self-reported drug use and urine test results are examined. Altogether over a dozen different measures provide direct comparisons of the accuracy of self-reports with official records.

Research Methods

The data for this paper comes out of the Policing Project, which was a research study designed to explore new means of evaluating police behavior. The Policing Project used the relatively novel technique of interviewing arrested individuals in order to obtain insights about policing and its potential effect on their (arrestees') illegal activities. A key finding from the investigators' review of the extensive scientific and management literature is that policing research has rarely obtained reports from offenders themselves about their contacts with police. Nor have arrestees in particular been asked for their perceptions of whether and how they may change their offending behaviors due to police policies. This research was designed to fill that gap by exploring various domains from the standpoint of the arrestee: perceptions of police behavior; involvement in drug use and sales; involvement in nondrug criminal activities, including so-called quality-of-life offending; prior arrest and criminal justice history; mobility patterns; and contacts with non-criminal justice institutional entities. The current report presents only arrestee self-reports of their criminal justice histories.

The Policing Project was a supplement to the research platform provided by the Arrestee Drug Abuse Monitoring (ADAM) program. Since 1987 the ADAM program has obtained, on a quarterly basis, drug use histories and urine samples from arrestees at Manhattan's central booking facility. Starting in July 1998, ADAM was expanded to include samples of arrestees from all five boroughs of New York City. Data from the ADAM program provide powerful indicators of the prevalence of various illicit drugs among arrestees and of trends over time. ADAM is the only major, ongoing survey of drug use that employs a particularly potent validity check, urine tests, to corroborate self-reported drug use. (GAO 1993).

A key component of the project was the on-going collaboration between researchers at National Development and Research Institutes and the New York City Police Department

(NYPD). The Deputy and Assistant Commissioners and other key staff in the NYPD Office of Policy and Planning suggested many of the themes, topics, and items guiding the research, as well as collaborated with project staff to implement the study.

Data Collection

Several interviewers from the ADAM program were used to recruit subjects and administer both the ADAM protocol and the Policing Supplement instrument. Interviewers followed ADAM procedures for selecting respondents and administered the ADAM schedule in use in 1999 (NIJ 2000). Immediately afterwards, interviewers gave the informed consent for the Policing Supplement; if the person agreed, the interview was conducted immediately. Over 95 percent of ADAM subjects who were approached agreed to complete the Policing interview as well. During the third and fourth quarter of 1999, 892 subjects completed both the ADAM and Policing interview schedules. The sample is of sufficient size and statistical power to address the current analytical questions.

During the informed consent process, Policing subjects were asked for written permission to have the interviewer record their arrest number, arrest date and time, and other personal identifying information. Subjects were informed that the project would obtain their criminal histories from New York City and State agencies that retain such information.

Linking Self-Reports of Arrestees to Official Criminal Histories

Project staff managed all details of both the project documentation and the building of the resulting data files. First, ADAM and Policing Supplement data files were matched and merged using the ADAM barcodes, creating a combined Policing-ADAM data set. Next, arrest-related and other identifying data were used to obtain defendant and court processing information from

the New York Criminal Justice Agency (CJA), and official criminal record information from the New York State Division of Criminal Justice Services (DCJS). Before obtaining the data, information transfer agreements governing access to and use of the information were negotiated with both agencies. New York State law permits transfers of official criminal histories, including sealed cases, to professional researchers for bona fide research purposes. This project obtained both sealed and unsealed criminal events by collaborating with DCJS to create an anonymous research data set, as described in Johnson et al. (2001). The end result of all data collection was two data sets. The first was a large integrated data set containing all of the variables derived from the ADAM schedule, the Policing Supplement instrument, and dispositional information from CJA. This data set was then linked, via an anonymous case number, to a second data set containing each subject's official criminal history. The criminal histories were provided as several records, with each record representing an arrest, a sentence, or related information for a given individual. For each subject, project staff aggregated the data across event records to create counts and to develop various measures of criminal history contacts. These counts and measures, which include both sealed and unsealed records, are used in the analyses below.

Official criminal history data generally have significant limitations, primarily due to jurisdictional issues, variations in agency reporting practices, and data sealing procedures mandated by New York State law (Johnson et al. 2001). Despite these limitations, the official record data obtained were largely complete and contained few variables with either missing or out-of-range values. Project staff were able to compute the number of arrests, convictions, jail, prison, and probation terms for specific offenses (e.g., robbery, drug sales, felonies, etc), and over different time periods (lifetime after age 16, past 6 months, etc.).

Findings

Demographics

Men comprised a majority of Policing Supplement respondents, at 58.4% of the total. The ethnic composition of the sample was overwhelmingly non-white: 63.8% were black/African American; 23.4% Hispanic; and 11.8% white. The mean age of the sample was 32, although a significant portion (38.4%) were over 36. Regarding marital status, only 12% reporting being married, with another 16% reporting unmarried cohabitation. Over 70% of policing respondents were single or separated, widowed, or divorced. These arrestees existed largely outside the conventional economic system: just over a third indicated having employment, either full or part-time, while a fifth reported welfare and 19% reported illegal income as primary income sources. Finally, about an eighth of the arrestees claimed to be living outside of a standard apartment/house.

Arrest Charges and Criminal Histories

The instant arrest charges present among these respondents were mostly misdemeanors (67.2%), although a significant proportion (31.4%) of felonies were present. Classifying respondents according to their primary, or most serious, arrest charge, a quarter (24.0%) were arrested for drug possession (including marijuana) and a tenth (9.6%) for drug sales. Robbery, burglary, and larceny together constituted 16.2% of the arrest charges; other violent index offenses (assault, homicide, rape) were 11.4%. Two-fifths (about 40%) of all charges were classified as "other" crimes; these include a variety of offenses, such as disorderly conduct, fraud, and prostitution.

Regarding past criminal justice involvement, close to a fourth of subjects claimed to have no previous arrests, while 39 percent reported an arrest in the past six months, and 38 percent an arrest occurring over six months ago. A majority of arrestees (three-fifths) claimed to have never

been incarcerated, either in jail or in prison; 15 percent claimed incarceration in the past six months, and 22 percent reported being incarcerated more than six months ago.

Johnson et al. (2001) document that the Policing sample appears to be representative of the population of persons arrested in four major boroughs of New York City in the second half of 1999. The sample characteristics are also comparable to the ADAM sample collected during the same time period, and, excepting gender, are very comparable to those of the population of all persons arrested by the NYPD during the weeks that the Policing interviews were conducted.

Comparing Arrestee Self-Reports with Official Records

The Policing Project was intended in part to document the value of self-report information provided by arrestees about their drug use, offending patterns, contacts with the criminal justice, and the impacts of policing initiatives upon their routine activities. This specific paper addresses a central question in criminal justice research: Compared to objective measures, such as official criminal history records or urine test results, how valid are offender self-reports, provided at arrest, about current drug use and prior criminal justice contacts?

Two components of self-report accuracy are distinguished here: gross and fine precision. Gross accuracy refers to the validity of reports on whether or not a person has a criminal justice history of arrest, jail, prison, etc. Fine precision accuracy refers to the validity of detailed reports of a person's criminal history, such as the recency of arrests or imprisonment, the exact number of times arrested or imprisoned, the different types of crimes for which they were arrested, and the length of time incarcerated.

The analyses here employ a general concordance table to document gross accuracy, and an accuracy typology to outline the fine precision accuracy, of self-reports. Concordance tables are

routinely used in biomedical and social science research to compare two different measures of the same phenomena. They are composed of a number of key rate measures (see Table 1):

[Insert Table 1 about here]

Key Concordance Rate Measures

Denial Rate is the percentage of those respondents who deny involvement (FN) divided by those subjects whom the criterion measure documents to be positive (FN/CP * 100). Thus, it shows the proportion of persons who appear to be forgetting, concealing, or otherwise not disclosing involvement among all persons who are positive according to an external criterion indicator. Such denial is a main and key concern of criminal justice personnel. Among criminal justice practitioners such inconsistencies would be labeled as "lying," "deceit," or "withholding." The term used here, denial rate, more accurately captures the range of offender motivations for not reporting criminal justice contacts that may be found in their criminal justice record. (A more neutral term often used in the scientific literature is "non-disclosure rate").

True Positive Rate is the percentage of those respondents who report involvement in conjunction with a positive criterion measure (TP/GT * 100). This rate effectively records the percentage who accurately disclose their involvement in the phenomena.

True Negative Rate is the percentage of those respondents who report no involvement in conjunction with a negative criterion measure (TN/GT * 100). This rate effectively records a confirmed denial, the percentage who accurately self-report not being involved in the phenomena.

Percent Agreement Rate is the proportion of all respondents whose self-reports (either negative or positive) are found to correspond correctly with the criterion measure ((TP + TN)/GT

* 100). This is the proportion of respondents who can be documented as giving valid answers according to criterion measure; it is also the sum of the True Negative and True Positive Rates. A simple computation, 100% - percent agreement rate, provides the percentage of arrestees who give a discrepant answer.

The authors have also computed a variety of concordance statistics, including kappa, conditional kappa, and phi. However, kappa is biased or overcorrects if the marginals are highly skewed, which occurs whenever the rates of either measure, whether the self-report or the criterion, deviate too far from the midrange (Cicchetti & Feinstein, 1990; MacLure & Willett, 1987; Feinstein and Cicchetti 1990). The marginals are very skewed for most measures here. Moreover, these statistics are not intuitively clear to criminal justice professionals. For these reasons, such concordance statistics are not presented here. Rather, the findings reported below primarily stress the percent agreement and denial rate percentages as defined above.

Johnson et al. (2001) present several concordance tables, of which two are reproduced below to demonstrate examples of high and low concordance.

[Insert Table 2 about here]

Self-reports of heroin use in the past three days appear to be accurate (opiate positive) for about a tenth (9.1%) of respondents while denial of heroin/opiate use appears accurate (opiate negative) for over four-fifths (82.4%) of the Policing sample, a percent agreement rate of 91.4%. Among those testing positive for opiate metabolites, two-fifths (39%) did not self-report heroin use in past 3 days, a low-moderate denial rate.

[Insert Table 3 about here]

Only 5.2% of arrestees correctly reported a lifetime adult arrest for a robbery and were found to have an official NYS robbery arrest. A majority, 70%, accurately denied a prior robbery arrest, as no (zero) robbery arrests were listed in their official records. Thus, three-quarters (75.2%) of the sample provided accurate information on their robbery arrest history, an acceptable agreement rate. Among subjects having an official NYS robbery arrest, however, over four-fifths (81.1%) denied or reported not having a robbery arrest. Additionally, a small number (n=23) of respondents reported a robbery that was not located in official criminal histories.

[Figure A about here.]

Self-reports of general criminal histories

Figure A summarizes the results from 13 separate concordance tables. The bar to the left demonstrates the percent agreement rate, while the bar to the far right shows the denial rate. Across all measures, both agreement and denial rates vary, depending on whether the measure is of general criminal justice involvement or involvement in specific types of crime or substance use.

The length of the percent agreement bar shows that a majority of arrestees provide self-reports that correspond to the official records - for all measures. The percent agreement rates for heroin use (91.4%) and ever in state prison (89.1%) demonstrate very high concordance. Moderately high agreement rates, within a 10 percentage point range (from 70% to 80%), exist for the following measures: lifetime arrest, drug offenses, robbery, violent crimes, jail, probation, cocaine/crack use, and marijuana use. The percent agreement rate is poor for property crime (53.5%) and index crimes (50.4%). Excluding property and index crime, the data suggest that the self-reports of criminal history, whether positive or negative, are accurate or valid for about three-quarters of arrestees.

Interestingly, underlying relatively similar agreement rates are different patterns of criminal justice involvement. At one extreme, a majority of subjects (61.7%) both self-report and actually have an official record of a lifetime arrest, while only a few (13.3%) report no prior arrests and show no prior arrest record. At the other extreme, a clear majority (70.0%) are confirmed as not being arrested for robbery, with a very few, 5.2%, having a confirmed robbery arrest. In the middle, as many arrestees are confirmed as having been jailed (36.0%) as are confirmed as never having been in jail (35.6%).

Policing subjects were quite accurate in disclosing general aspects of their criminal justice history. For instance, about two-thirds accurately reported having a prior arrest, while an eighth correctly denied a prior arrest and had none on their official record. Further, the denial rate for lifetime arrest was among the lowest of all 13 measures at 13.3%. The few subjects who denied arrests that were present in New York State criminal history files were nearly offset by the slightly fewer subjects whose self-reported arrest(s) were not found in their NYS criminal histories.

Subjects were also forthcoming about being in jail. Thirty-six percent accurately reported a prior jail sentence, while just under a third (32.8%) denied one; the remaining another 36% reported no prior jail time. Subjects were even more accurate in reporting their prison experience. Three-quarters correctly reported never being imprisoned, and 14% correctly reported being in prison. Only about a quarter (27%) of those with prison sentences denied any prison. Interestingly, the denial rate of a probation sentence was high (61%), even while probation involvement (or its lack) was accurately reported by three quarters of Policing subjects. This figure is in sharp contrast to the denial rates for other general criminal justice contacts, such as recency of arrest (13.4%) lifetime arrest (21.2%) and ever in state prison

(27.1%). Note that the rate for recency of arrest is the lowest of any measure examined. The high denial rates for probation may be due to the comparatively ambiguous nature of a probation sentence.

Overall, policing subjects appeared to provide valid information on general aspects of their criminal justice history, such as whether they had been arrested or been in jail, state prison, with probation being the notable exception. Moreover, these findings are consonant with previous research indicating that offender self-reports of general criminal justice contact are largely valid.

Self-reported arrests for specific serious offenses

However, what about self-reports of involvement in serious offenses? While the percent agreement rates were high, this was primarily because the vast majority, close to 70%, of Policing subjects were confirmed as not having official records for either of those crime types. In fact, the denial rates for these offenses were quite high. The vast majority (93%) of subjects with an official record for violence did not report an arrest for a violent offense. Likewise, a substantial majority (81%) with a robbery record denied having a robbery arrest. Very small proportions of arrestees self-reported an official record for robbery (5%) or for a violent offense (1.7%).

These findings are echoed for other offenses. For instance, a substantial majority (83%) of persons with an official record for property offenses also denied having such arrests. Only 9% accurately disclosed such an arrest, while slightly under half (45%) correctly reported no such arrest. Seventy-six percent of arrestees having a past arrest for an index crime (a summary measure including both violent and property offenses) failed to report it. Overall, over three-quarters of arrestees do not report having an arrest that is found in their official record for relatively serious offenses.

Interestingly, drug-related arrests had much lower denial rates. Among those with official record of drug arrests, about 38% denied them - a denial rate half as high as for index crimes, and less than half of that for robbery and violent crime arrests. Additionally, this number is almost equal to that for those correctly reporting a drug arrest (37%).

Overall, policing subjects provided less valid data regarding past arrests for serious crimes, specifically violent, robbery, property, and index crimes. Though comprising a small proportion of the sample, the vast majority of subjects with such offenses in their New York State criminal histories did not self-report arrests for these offenses.

Concordance of self-reported drug use with urinalysis

Self-reports of illicit drug use are quite concordant with urine test results for substantial majorities of Policing subjects. The agreement and denial rates by Policing subjects are comparable to those among other high-risk populations at liberty. A comparison of drug use concordance measures from the ADAM national program average (across all 35 sites [Golub 2001]) versus those from Policing subjects, respectively, shows the following: for cocaine/crack: percent agreement rate, 79% vs. 78.5%; true positive rate, 19.4% vs. 30.2%; and the denial rate, 50% vs. 41%; heroin/opiates: percent agreement rate (95.1% vs. 91.4%), true positive rate 4.8% vs. 9.1%, and the denial rate 43.4% vs. 39.0%; and marijuana: percent agreement rate 77.5% vs. 75.6%, true positive rate 27.0% vs. 32.6%, and the denial rate, 21.4% vs. 21.4%. The Policing (and NYC ADAM) subjects were somewhat higher in their correct reports (true positive rate) about the use of these three drugs, although both groups have very similar agreement and denial rates.

These concordance rates are very similar to those found in the National Treatment Improvement Evaluation Study (NTIES) (Gerstein et al 1997). Comparing the NTIES sample to

Policing subjects, the percent agreement rates were identical for heroin (91.5%, vs. 91.2%, respectively), and slightly lower for cocaine/crack (82.5% vs. 78.5%) and marijuana (86.7% vs. 75.6%). The similarity in rates is more remarkable given the higher levels of confirmed drug use by the Policing subjects. Specifically, the percent positive rate among NTIES subjects was lower than that for Policing subjects for cocaine/crack (15.8% vs. 30.2%), and marijuana (10.3% vs. 32.6%), and virtually equal for heroin (9.5 vs. 9.1%). As the NTIES sample consisted of individuals who had been in drug treatment, their lower positive rates might be expected. The denial rates for NTIES versus Policing subjects were very similar for cocaine/crack (45.0% vs. 41.4%) and heroin (41.3% vs. 39.0%). There is a large gap for marijuana (36.4% vs. 21.4%), with the drug treatment sample being somewhat more likely than the Policing sample to deny use.

[Insert Table 4 about here]

Accuracy Typology

Unlike concordance tables, the Accuracy Typology (Table 4) summarizes the respondent's fine precision of self-reporting. This typology recognizes varied types and levels of discordance between self-report and a criterion measure, here the official criminal justice history. On the diagonal, accurate non participants are subjects whose self-report of no involvement is confirmed by no or zero record(s) present in their official criminal history. (Cell 00 [zero, zero]). Precise positive reporters are subjects whose self-reports of involvement are confirmed by exact equivalence to the events in their official criminal history records. (Diagonal cells except for the 00 cell).

Above the diagonal, nondisclosers are subjects who self-report no involvement, but whose official criminal record indicates one or more criminal justice contacts. (Cells in the zero (0) row,

excluding cell 00). Underreporters are subjects who self-report one or more episodes, but indicate fewer episodes (of arrest, jail, imprisonment, etc) than are documented in their official criminal histories. (Cells above diagonal and below the zero row).

Below the diagonal, overdisclosers are subjects who self-report one or more lifetime contacts, but whose official criminal record indicates zero or no events. (Cells in the zero column, excluding 00). Overreporters are subjects who self-report greater number of episodes than are present in their official criminal history. (Cells below the diagonal and to the right of the zero column).

Depending upon the specific measure, self-reports of one to two episodes fewer (or greater) than found in the official record might be classified as showing minor discrepancies, possibly due to memory fade or inaccurate recollection. Conversely, self-reports of three or more episodes fewer (or more) than are present in official records may be considered to be major discrepancies, indicating possibly more serious underreporting (or overreporting). Precise positive reporters and nonparticipants (A and B above) provide self-reports that are the most valid, as this is commonly understood. By contrast, non- and over-disclosure (C and E) constitute serious incongruities between self-reports and official records. Under- or overreporting (D or F) represent discrepancies in the numbers of self-reports versus official records, given that a history exists.

To further complicate matters, these gradations of accuracy can be substantially affected by the metric used and length of an offender's criminal career. In documenting a criminal career, the time window of interest may range from the entire lifetime, to the past year, to the past 30 days. Thus, it is highly likely that the precision of self-reports may vary according to the measure and metric used. One Accuracy Table (Table 5) is reproduced as an example, and compares the

number of months in jail that arrestees self-reported compared with the length of sentence(s) to jail present in official records.

[Insert Table 5 about here]

[Insert Table 6 about here]

Tables 5 and 6 show that 28.9% of Policing respondents were accurate nonparticipants for the jail measure (i.e., subjects both reported and were confirmed as never having a jail sentence), while 5.9% provided precisely accurate self-reports on the length of their lifetime jail sentences as compared to the official records. Among the remaining subjects, fewer were nondisclosers (14.8%) than were overdisclosers (20.1%); however, the proportion of underreporters (20.1%) was twice as large as that of overreporters (10.2%). When the average lengths of jail time were computed and compared, self-reports of months in jail were modestly close to official records, although the official jail sentences were somewhat longer. This discrepancy, which measured - 3.3 months, might be a result of the limitations of the official measure.

[FIGURE B ABOUT HERE.]

The precision of arrestee self-report

In Figure B, the Agreement Typology is summarized for seven measures of general criminal justice contact. Only data from persons who had an official record or self-reported involvement are included (specifically, accurate nonparticipants are excluded from the denominator). The top of each bar indicates the proportions of the sample that provide precisely accurate self-reports as confirmed by their official records. Only for the most recent arrest do close to half provide precisely accurate reports. About 10 percent provide precise self-reports for the total number of arrests in lifetime, total jail episodes, and length of time in jail. About a quarter provide precise

reports of the number of probation episodes, or length of time in jail. Given these low numbers, the absolute precision of self-reports of criminal justice contacts is not high. Between a third to two-thirds self-report contacts that are either not found (overdisclosers), greater than that found (overreporters), or less than that found (underreporters) in their official criminal histories. Less than a quarter are complete nondisclosers on all measures (bottom section of each bar) except for probation episodes, where nearly half did not disclose such episodes found in their records.

Overall, respondents with prior criminal histories do not appear to be systematically concealing any criminal justice involvement. Discrepancies, when present, relate to the details of such involvement. Arrestees either overdisclose (e.g., self-report criminal justice contacts not found in official records), overreport (self-report more contacts than are found in their criminal justice histories), or underreport (self-report fewer criminal justice contacts than found in their records). Underreporting appears especially common for the total arrests measure, as well as for the number and length of jail episodes. This tendency to underreport may be somewhat offset by the overdisclosure and/or overreporting of prison sentences, or the length of time in jail or prison.

General Conclusions

Overall, the concordance of arrestee self-report with official record data ranges from very good to poor, depending upon the specific measure. For any given measure, substantial proportions denied involvement and were confirmed to have no official record. Further, substantial proportions of arrestees self-reported criminal justice contact (arrests, jail, or prison time) that was confirmed by official records.

For any specific measure, however, significant minorities of respondents were documented as having criminal records which they did not self-disclose. Across the various measures, denial

rates ranged from low to very high. The denial rates were very high (70-95%) for self-reports of serious criminal offenses (e.g. property, robbery, violence, and index overall crimes), but relatively low (10-25%) for self-reports of arrest, jail, and prison experience. Self-reports about the most recent arrest or prison episode were more accurate than were self-reports of the total number of lifetime arrests or jail episodes. Arrestees were also imprecise in their reports of certain details of their criminal history. Self-reports of time in jail, prison, or on probation were somewhat less than the sentence imposed by the courts. While the precision of arrestee's self-reports was not high, clear denial or concealment of criminal justice contacts was not high either. Both over- and underreporting were generally similar in magnitude.

In conclusion, neither self-reports by arrestees nor criminal justice official records can be demonstrated to provide superior accuracy or precision about arrestees' actual contacts with the criminal justice system. Each provides important information about offender criminality that appears to be independent and valuable for understanding offender crime patterns. Nevertheless, attempts to study crime via offender self-reports of serious criminal offending are much more suspect.

Implications

The findings in this paper have important implications for criminal justice practitioners and researchers in the future studies of both criminal behavior and the intersection of criminal behavior with the criminal justice system.

Integrity of official record.

The official record information obtained from CJA and DCJS was of uniformly high quality and completeness. Both CJA and DCJS were able to locate the appropriate records for the vast

majority of Policing subjects with little difficulty and to provide complete data sets containing their records, while respecting the confidentiality of individuals and the research purposes of this project. Most importantly, the official history data can, with some caveats, be employed as a standard with which to document the concordance and accuracy of respondent self-reports.

The accuracy of arrestee self-report

The examination of the concordance and accuracy of both self-reports and official records help document the value of both sources of information. Arrestee self-reports are shown to have substantial agreement with official record data for the majority of arrestees for most measures. This positive general conclusion must be carefully tempered by the finding of very high denial rates by arrestees about their prior involvements in serious criminality (violence, robbery, property, and index crimes). Many are concerned about the veracity of self-reports by persons who have been arrested for serious crimes like robbery, violence (mainly homicide, rape, aggravated assault), and property crimes (burglary, grand larceny, auto theft). These three offenses are defined as index offenses as reported to the FBI and published in the Uniformed Crime Reports as the major indicator of serious crime. The denial rates in the current study appear higher than those found in previous research, but are consistent in showing that self-reports of a serious criminal history tend to be of lesser accuracy (Simon 1999). The concordance and accuracy rates of these Policing subjects are generally within the range of concordance results reported in other studies cited earlier. Prior research shows that most offenders will report a lifetime history of arrest and recent arrest. The percentages of Policing subjects admitting other types of criminal involvement, such as jail or prison, are similarly high.

These findings are similar to those present in the research literature on self-report compared with official records among imprisoned populations (Chaiken and Chaiken 1982; Marquis,

1981). The results among Policing subjects regarding the concordance of self reported drug use with urine tests are very similar, with modest differences, to other studies found in the professional research literature (Gerstein et al. 1997; Harrison and Hughes 1997) and in the companion ADAM research program [Golub 2001; NIJ 2001]. The overall results of this study coincide with the conclusions of Maisto, McKay, Conners (1990) regarding the overall accuracy of self-reports.

The highest levels of non-disclosure, demonstrated by denial rates of 80% or more, occurred mainly for the most serious criminal offenses. When offenders had an official record of arrest for violent offenses, they almost uniformly denied having a violent arrest. Likewise the vast majority of those with a robbery official record denied having a robbery arrest; and those with a official record for property offense also denied a property arrest. Interestingly, arrestees with an official record of drug-related arrests were much more likely to report a prior drug arrest.

In addition, analyses of the Accuracy Typology indicate that self-reports rarely had fine precision when compared with official records. Interestingly, arrestees were as likely to overreport or overdisclose as they were to underreport or to deny being arrested or spending time in jail or prison. Faulty memory and limitations associated with the official record records may account for the lack of precise accuracy. Since under- and overreporting are equally common, the discrepancies do not appear to show evidence of any clear intention to conceal (excepting serious offenses).

Despite the concerns of criminal justice officials, offender self-reports appear to be sufficiently accurate and precise for use in criminological research investigating patterns of offending, levels and types of drug use, and manner and degree of contact with the criminal

justice system. Strong caveats, however, may be needed when serious crimes are to be a major focus of the analysis.

Notes

1. The percent agreement rate is an overall measure of the similarity between data from self-report and that from an official standard (say, urine test results), while the denial rate measures the proportion of persons who fail to report a behavior that is revealed by an official standard. These terms will be discussed in further detail in subsequent sections of the paper.
2. The terms "sensitivity rate" or "disclosure rate" are widely employed in epidemiology and related fields. The "denial rate" here is 100% minus the sensitivity (disclosure) rate.
3. One limitation here is the fact that the official records maintained by DCJS do not obtain detailed dates of admission and/or release from jail.

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Table 1. The General Concordance Table

		Respondent Exceeds Cut-Off on <i>Criterion</i> Measure?		
		NO	YES	Row total
Self-Report of	NO	(TN) True negative	(FN) False negative	(RN) Report negative
Specific Behavior?	YES	(FP) False positive	(TP) True positive	(RN) Report positive
Column Total		(CN) Criterion negative	(CP) Criterion positive	(GT) Grand total

Table 2. Concordance of Heroin Self-report Past 72 hours versus Urine Opiate Positive

Self-reported behavior: Used heroin in the past 72 hours	Opiate positive urine (official record)		
	No	Yes	Tot
No	654	46	700
Yes	22	72	94
Tot	676	118	794

Concordance Measures	Rate for Heroin
Denial Rate	39.0
True Positive Rate	9.1
True Negative Rate	82.4
Percent Agreement Rate	91.4

Table 3. Concordance of Ever Arrested Self-report vs. Official Record of Arrest for Robbery

Self-reported behavior: Ever arrested for a Robbery offense	Ever arrested for a Robbery offense (official record)		
	No	Yes	Tot
Missing	2	1	3
No	622	198	820
Yes	23	46	69
	647	245	889

Concordance Measures	Rate for Robbery offense
Denial Rate	81.1
True Positive Rate	5.2
True Negative Rate	70.0
Percent Agreement Rate	75.2

Table 4. Accuracy Typology (General Model) for Comparing Self-reported and Official Record Contacts with the Criminal Justice System

		<u>Count of prior episodes (official record)</u>										
		0	1	2	3	4	5	6 n	Total	
Count of prior episodes (self report)	0	Accurate Nonparticipants	Non- Dis Clos ure									
	1	Over-	Pre	Major								
	2	Dis- closure	Positive	Minor	Under-	Rep ort ing						
	3		Reporter									
	4		Minor	?								
	5				?							
	6						?					
	...								?			
	...n										?	
	Total											

Table 5. Correspondence between Self-reports and Official Records Regarding Length of Time Served in JAIL EPISODES (in New York State)

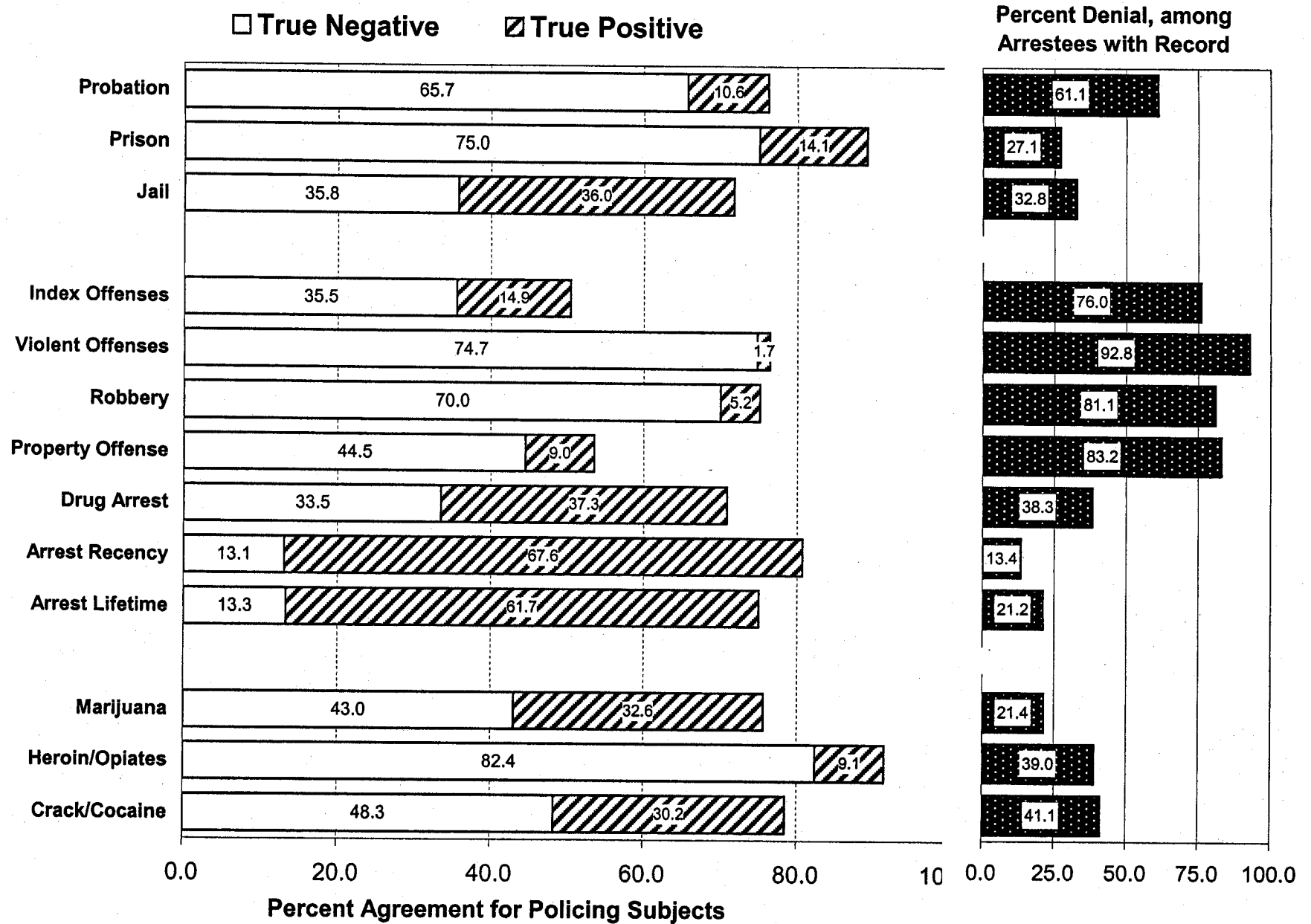
		Time served in jail (official sentences, in months)												Tot
		0	≤25	≤4	≤2	≤6	≤12	≤18	≤24	≤36	≤48	≤60	61+	
Time served in jail (self-report, months)	0	58	30	13	10	19	17	17	6	9	4	2	5	390
	≤25	91	10	7	4	8	3	5	2		1	2	1	134
	≤4	40	4	10	2	7	8	7	1	4	3	2	1	89
	≤2	7	1	2	2	3	5	3	1	2	3		2	31
	≤6	12	4	5	3	6	15	6	1	6	1	1	2	62
	≤12	11	4	5	3	7	8	7	6	8	9	2	1	71
	≤18	1				1	3	7	4	2	1		1	20
	≤24	8	2	1	1	1	3	4	3	5	5		3	36
	≤36	2	1	1			1	4	3	3	1	1	4	18
	≤48	1		1				1	1		2			6
	≤60	1			1	1	1	2		3	3			12
	61+	5	2	2		2		3		1	1	2	5	23
	Tot	437	58	47	26	55	64	66	28	40	34	12	25	892

Table 6. Accuracy Typology for Self-reports versus Official Reports for TIME SERVED in JAIL EPISODES in Lifetime

	Counts	Percent	
A. Accurate Nonparticipants	258	28.9	28.9
B. Precise Positive Reporters	53	5.9	5.9
C. Non Disclosers (minor)	43	4.8	14.8
Non Disclosers (major)	89	10.0	
D. Under reporters (minor)	72	8.1	20.1
Under reporters (major)	107	12.0	
E. Over-disclosers minor	131	14.7	20.1
Over disclosers major	48	5.4	
F. Over reporters (minor)	44	4.9	10.2
Over reporters (major)	47	5.3	

[Note: Minor discrepancies were less than 12 months; major discrepancies were 12 or more months.]

Figure A. Concordance of Self-report with Urine/Official Record



**Figure B. Precision of Self-Reports by Arrestees,
Excluding those Confirmed as Not Involved**

