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NATIONAL INSTITUTE
ON DRUG ABUSE

Drug Procurement
Practices
of the
Out-of-Treatment
Chronic Drug Abuser

A Cooperative Agreement for AIDS
Community-Based Research Consortium Project

National Institutes of Health

National Institute on Drug Abuse

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CONTENTS

EXECUTIVE SUMMARY

At the request of the Office of National Drug Control Policy (ONDCP), the National Institute on Drug Abuse (NIDA) sponsored a study of the drug procurement practices of active injecting drug users (IDUs) and crack users. Using a community-based research infrastructure developed by NIDA to respond to emerging drug-related issues, trends, and consequences, including human immunodeficiency virus (HIV) infection, the study designed a rapid response assessment of patterns of drug use, methods of obtaining drugs, and income sources and expenditures for drugs in a noninstitutionalized, out-of-treatment population. The identification of patterns and procurement practices of chronic drug-using populations can be useful in the formulation of drug abuse policy decisions.

The sample includes 1,154 male and female active injecting drug users and crack users (approximately 120 respondents from each site) recruited by targeted sampling designs in 10 cities across the United States participating in the NIDA Cooperative Agreement for AIDS Community-Based Outreach/Intervention Research Program. The selected sites provide regional representation and diversity in demographic composition, the price of street drugs, procurement patterns, and resources used to obtain illicit drugs. Data collection was performed using structured interviews.

Aggregated results of all cooperating sites are presented in this report based on a typology of drug use. The typology characterizes users by patterns of multiple forms of cocaine and heroin use in the 30 days preceding the interview. (The typology takes this focus since data on marijuana, other opiate, and amphetamine use indicated relative consistency across groups.)

Data collection at each Drug Procurement Study site was guided by the primary objective of providing a sample of the population of out-of-treatment, noninstitutionalized drug users based upon local knowledge of patterns and trends. Collectively, these data provide broad-based estimates and characteristics of drug users who are out of treatment. These data do not provide prevalence estimates of the use of crack cocaine or injection drugs in the general population. Further, while the data represent 10 geographically diverse cities, without the estimate of true parameters of the out-of-treatment drug-using population, it is difficult to determine the national representativeness of this sample. Factors related to the research design, including issues of targeted sampling designs, self-selection, and nonresponse, cannot be fully ascertained.

Analysis focused on three principal issues of drug use and drug procurement—overall patterns of drug use and expenditures, patterns of drug acquisition, and sources of income. Findings for each are presented below.

Patterns of drug use and drug expenditures: Results indicate that this population (noninstitutionalized, out-of-treatment drug users) engages in behaviors that cause considerable harm to themselves, their dependents, and society in general. Most respondents (56 percent) reported injecting drugs. While 53 percent reported previous formal drug treatment, the majority of respondents continue to use cocaine and heroin with great frequency. Although there is considerable variation in the use of primary drugs (powdered cocaine, heroin, speedball, crack cocaine), the use of cocaine, particularly in the form of crack, is pervasive in the aggregated sample across all primary drug user groups. Multiple forms of heroin and cocaine use are common to all user groups, with the single exception that primary crack smokers were less likely to engage in other drug use forms. In this sample, women were more likely to be in the crack only group than in the crack primary group or in the other drug groups.

The extensive use of drugs by respondents in the study requires an outlay of a significant portion of respondents' resources for the purchase of drugs, undoubtedly limiting the amount of money available for other expenses such as housing, food, clothing, and medical care. Almost two-thirds of cash expenditures of the sample in the past 30 days were reported to be spent on drugs.

Acquisition of drugs: The majority of respondents reported that drugs are easily acquired when cash is available. Conversely, most respondents indicated a lack of cash rather than a reduced availability of drugs as the primary obstacle in drug acquisition. While the use of cash or cash in combination with other means are most common, other acquisition forms reported include obtaining drugs for free, trading sex for drugs, and selling drugs to acquire drugs for personal use.

Respondents who found drugs difficult to obtain in the past 30 days were more likely to engage in selling/dealing drugs or in trading goods for drugs. Those with higher levels of drug use were more likely to report engaging in drug selling/dealing. Primary crack use was associated with trading sex for drugs.

Sources of income: The majority of respondents reported some source of legal income in the past 30 days. These legal sources included employment, public assistance, or support from family or friends. Nearly half of the sample indicated income in the past 30 days from some type of employment, including day work paid in cash.

More than half of the respondents reported involvement in cash-generating criminal activities in the past 30 days. Drug sale-related activities, including selling drugs to nondealers, finding buyers, holding drugs, providing space, or other drug preparation activities, were the most frequently reported income-generating criminal activities in this sample. Men and women were very similar in terms of percentages reporting legal income, illegal income, or a combination of legal and illegal income. Women were more likely to report income derived from commercial sex; men were more likely to report a variety of illegal income sources, including involvement in drug trade, shoplifting, numbers running, motor vehicle theft, or buying/receiving stolen goods. Illegal income was more likely among respondents with higher levels of primary drug use and those reporting hardship in acquiring drugs. Results in this sample indicate that those in cocaine (smoked and injected) primary groups had the greatest likelihood of being involved in criminal activities.

Drug Use, Crime, and Public Health—Policy Issues for the Future

Drug-using behaviors have complex health and social consequences that require the attention of the Nation's public health, drug control, and criminal justice systems. These data show that this sample population of injecting drug users and crack users is involved in chronic drug use, engages in illegal activities to acquire drugs, and is exposed to the risk of HIV infection and sexually transmitted diseases through injection practices and through trading sex for drugs. Twelve percent of this population, for example, tested positive for HIV antibodies.

Given the extensive use of personal resources to obtain drugs, and a considerable percentage of respondents who have already been in drug treatment but continue to use drugs, findings indicate the need for strategies that "bridge" to formal drug treatment, such as community-initiated and community-based prevention programs. Traditional drug control and criminal justice policies have emphasized demand and supply reduction. The findings from this study support an increased emphasis on harm reduction, including innovative strategies to reduce high-risk drug-using behaviors and to recruit, engage, and retain drug users in treatment. Intervention programs must be located in neighborhoods where people buy and use drugs and designed with an awareness that chronic drug users often do not seek treatment, are less likely to benefit from treatment, and continue to place themselves at high risk of acquiring and transmitting HIV. Creating a research infrastructure to support periodic and coordinated data collection and developing the capacity to respond rapidly to emerging issues related to patterns and consequences of drug use are critically important.

INTRODUCTION

Policymakers in the United States rely on more than 38 Federal drug abuse databases and a growing body of related research to assist them in understanding the nature and extent of problems associated with drug abuse; these resources also contribute to discussions about strategies to address drug abuse problems (Bureau of Justice Statistics 1990, 1992). While each of the existing databases adds to our knowledge of the consequences of illegal drug use (for both the individual and society) and the impact of drug abuse-related programs, each limits its focus to selected aspects of the drug problem (for example, estimates of the use of different drugs, numbers and patterns of drug-related health emergencies, rates of drug use among those arrested for serious crimes, drug prices and purity indicators, and crime statistics); the complex relationships among drug abuse, crime, and health and social consequences remain obscured (Bureau of Justice Statistics 1992; U.S. General Accounting Office 1993).

These sources indicate, for example, that in 1991, approximately 75.1 million Americans (37 percent of the population) had used illicit drugs one or more times in their lives (Substance Abuse and Mental Health Services Administration 1992); estimates of the numbers of injecting drug users in the United States range from 1.1 to 1.5 million (Dondero 1987; Turner et al. 1989). Americans spent approximately $30 billion on cocaine, $9 billion on heroin, $8 billion on marijuana, and $2 billion on other illegal drugs in 1991 (Rhodes et al. 1993).

It is estimated that about 5.5 million persons, more than 2 percent of the adolescent and adult population, need treatment for drug abuse (Gerstein and Harwood 1990). In 1992, more drug users than ever—an estimated 433,000—received emergency medical treatment for drug-related episodes; since 1990, there has been an upward trend in emergency room admissions during which patients mention cocaine use (Substance Abuse and Mental Health Services Administration 1993). The societal costs of the use of drugs other than alcohol—including treatment, lost productivity, motor vehicle accidents, crime, and stolen property—have been estimated at $58.3 billion per year (Rice et al. 1991).

An important tradition in research on drugs and crime has focused on heroin users, particularly injecting heroin users. While heroin remains the drug of choice among many drug users, cocaine and crack have gained unprec-

edented notoriety due to their increasing supply, declining price, and association with violent crime (Goldstein et al. 1993). Existing drug abuse research also concentrates heavily on male users, even though women have always constituted a significant proportion of drug users (Ashbrook and Solley 1979, p. 27; Cisin et al. 1978; Glynn et al. 1983; Prather and Fidell 1978). (See also the appendix, *Selected Background Resources*, page 19.)

Recent changes in drug use patterns (e.g., widespread and increasing use of cocaine and its derivative, crack) and consequences (e.g., proliferation of drug trade activity, violence, and the continuing epidemics of HIV infection and tuberculosis) make it clear that information from sources other than existing databases may be required to guide formulation of a more targeted and comprehensive drug control policy. The increasing availability of cocaine and crack has further increased the number of female users, sometimes as a result of what appears to some to be drug "marketing" strategies aimed specifically at women (Massing 1989).

The widespread use of crack cocaine has had criminal justice implications for women and racial minorities. In a study of arrestees in major cities in the United States, the National Institute of Justice found that increasing supplies of crack have resulted in particularly high rates of use among women (National Institute of Justice 1988). Drug Use Forecasting (DUF) data have consistently demonstrated that rates of drug use in general, and cocaine use in particular, are extremely high among women who come into contact with the criminal justice system (National Institute of Justice 1992). These findings have been supported by other studies; in their research on women and drug use, Hser et al. (1990) reported that female drug users are involved in property crime, drug dealing, and prostitution to support their drug habits.

In addition to gender-related trends associated with changing patterns of drug use, there have been recent reports in both popular and professional publications focusing on the nexus among race/ethnicity, drugs, and crime. Reports of increases in drug-related arrests among African Americans and wide disparities in arrests among African Americans and whites have coincided with the emergence of crack cocaine during the 1980s. One study, based on 1990 census records and arrest data reported to the Federal Bureau of Investigation, found that in 30 major cities, drug-related arrests among African Americans were at least 10 times greater than those among whites (Meddis 1993). While the number of non-Hispanic whites in State prisons for drug-related crimes increased by 16,000 to a total of almost 30,000 between 1986 and 1991, the number of African Americans imprisoned under similar circum-

stances during the same period increased by 65,000 to a total of almost 80,000 (Meddis 1993). Since the early 1970s, drug-related arrest rates for whites have been relatively stable at about 300 per 100,000; among African Americans, these rates have grown at about 15 to 20 percent per year, peaking at nearly 1,500 per 100,000 in 1989 and declining somewhat in 1990 and 1991 (Blumstein 1993).

Another major social and economic problem linked to both drug injection and crack use is the HIV/AIDS epidemic. Payment for illicit drugs is often "income in kind"; for example, dealers sometimes keep some portion of their drugs for personal use and often accept sex or other goods in payment for drugs. Of the more than 339,250 AIDS cases in the United States reported through September 1993, slightly more than one-third occurred among injecting drug users, their sexual partners, and/or their children (Centers for Disease Control and Prevention 1993). In the context of increased risk of HIV transmission, the relationship between drug use and commercial sex takes on particular significance. Trading sex for drugs or money and/or paying for sex with money and/or drugs have been reported in several studies (Inciardi et al. 1993; Hser et al. 1990; Carlson and Siegal 1991; Siegal et al. 1992). The examination of the drugs–crime connection takes on new urgency in light of recent reports that crack use is associated with increased sexual activity, not only for women but for men as well, and that crack use is common among all types of drug users (Ratner 1993), including chronic drug users who inject drugs.

There have been a number of small-scale but important studies on expenditures in drug use. Johnson et al. (1985) reported that the average user spent about $4,000 per year on heroin; when "income in kind" was taken into account, average annual expenditures were about $7,000. Reuter et al. (1990) found that the median expenditure for drugs was about $400 a month. These studies were restricted to samples from single communities, and/or individuals who had committed crimes. For elaboration on other studies of expenditures, see the ONDCP report *What America's Users Spend on Illegal Drugs* (Rhodes et al. 1993).

In response to changing drug use patterns, the increasingly complex consequences of drug abuse, and the limits of extant data on the chronic, out-of-treatment, drug-abusing population, the National Institute on Drug Abuse, at the request of the Office of National Drug Control Policy, conducted a study to examine drug procurement practices of noninstitutionalized, out-of-treatment injecting drug users and crack users and to provide data that can facilitate the discussion of policies and strategies related to drug abuse.

PURPOSE OF THE STUDY

This report presents information on the following research questions:

1. *Patterns of drug use*: Which drugs are being used by whom and how frequently are they used? What patterns, characterizations, or typologies can be observed?

2. *Expenditures for drugs*: How much do respondents spend on drugs? Who spends the most on drugs?

3. *Methods of obtaining drugs*: How easy is it to obtain drugs and how are drugs obtained? What role does bartering (for example, sex for drugs) play in the drug market, and what relationships between drug use and method of acquisition can be observed?

4. *Sources of income*: What are respondents' sources of income? What relationships can be observed between patterns of drug use, ease of obtaining drugs, drug use intensity, demographics, and sources of illegal income?

METHODS

The Drug Procurement Study was conducted as part of a larger, ongoing NIDA research initiative, the Cooperative Agreement for AIDS Community-Based Outreach/Intervention Research Program (hereinafter referred to as the Cooperative Agreement Program). The Cooperative Agreement Program is designed to monitor community-level trends in drug use practices, health risk behaviors, and HIV seroprevalence rates among a noninstitutionalized, out-of-treatment sample of injecting drug users and crack smokers in 21 program sites throughout the United States. A primary function of these monitoring efforts is to assess the effectiveness of community-based interventions in preventing the spread of HIV infection and other diseases among out-of-treatment drug users.

Ten of the Cooperative Agreement Program's 21 programs participated in the Drug Procurement Study, contributing data based on both the Drug Procurement and Cooperative Agreement data collection instruments. These sites reflect regional differences that were believed to be theoretically apparent in such key variables as racial/ethnic or gender characteristics of drug-using populations, the price of street drugs, procurement patterns, and resources used to obtain illicit substances. Sites were located in:

Dayton/Columbus, Ohio; Denver, Colorado; Detroit, Michigan; Houston, Texas; Long Beach, California; Miami, Florida; New York, New York; New Orleans, Louisiana; Oakland, California; and San Juan, Puerto Rico.

The sample for this study was drawn from neighborhoods characterized by illegal activities resulting from the presence of crack, heroin, cocaine, and speedball (an injectable combination of heroin and cocaine). Sampling plans within each site were developed using modified targeted sampling[1] (Watters and Biernacki 1989; Lambert 1990). Targeted sampling relies on aspects of snowball, quota, and survey sampling and ethnographic observation to construct a study sample that can provide representative data on drug use and disease risk behaviors within selected communities.

Data collection was guided by the primary objective of providing a sample of the population based upon knowledge of patterns and trends among IDUs and crack cocaine users in given neighborhoods. Generalizations from these data to the out-of-treatment population should acknowledge several factors that potentially diminish the representativeness of the sample.[2]

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1 Targeted sampling plans for the Cooperative Agreement studies were developed in three stages. In the first stage, profiles of geographic areas and populations characterized by high drug use and disease risk were constructed from available data resources within the participating communities. From these profiles, sampling quotas were developed based on relevant geographic and individual characteristics. The derived sampling quotas were then used as a sampling plan that "targeted" certain drug users residing in specified geographic areas. In the second stage of sampling, ethnographic observational methods were used to locate and gain access to drug-using networks. Networks that were accessed were matched to the targeted sampling communities and personal characteristics of the drug users within the networks. In the third stage, trained outreach workers used contacts within the identified networks to recruit individual drug users to participate in the study. The resulting samples are presumed to be "theoretically representative" of known populations of drug users residing within the targeted geographic areas. To ensure that adequate numbers of women were recruited for the study so that gender differences could be investigated, a quota of 30 to 50 percent women was imposed. In addition, a sampling quota of 50 to 70 percent drug injectors and 30 to 50 percent crack cocaine smokers was used to ensure that adequate numbers within each drug utilization group were included.

2 The availability and accessibility of subjects recruited within the sampling frame will be affected by seasonal and other factors. The potential for bias in characterizations of the population at risk based on these data diminishes significantly as the size of the sample increases. Second, problems of self-selection and nonresponse in the sample must be acknowledged. The impact of refused responses is unknown, although data are not reported for variables with substantial missing/refused responses. Finally, the reliability of self-reported data is dependent on the accuracy of the subject's recall as well as the rapport established with the subject by the interviewer.

Each site adhered to study eligibility criteria. Participants in the study were crack users and/or injecting drug users 18 years of age or older who used heroin or cocaine in the 30 days prior to study participation, as evidenced by a positive urine screen or recent needle marking, with no formal drug intervention or treatment in the past 30 days.

Data collection was performed using structured interviews.[3] The interview schedule used in this study was designed as a supplement to the Risk Behavior Assessment (RBA) questionnaire currently used by the Cooperative Agreement sites. All sites used the RBA to collect data on participants' demographic characteristics, needle-sharing behavior, needle-related hygienic practices, and drug use behavior (drug use within the prior 30 days, routes of administration, and frequency of use).

Information was also collected regarding risk-related sexual practices, history of criminal justice system involvement, HIV antibody testing history, and involvement in community-based treatment. The instrument concluded with an interviewer assessment of respondent understanding, honesty, accuracy, and ability to answer the questions. The RBA required 30 to 45 minutes of respondent time and was administered in English or Spanish by trained interviewers. Data were collected between October 1992 and December 1992.

Following the RBA, respondents were asked supplemental questions as part of the Drug Procurement Study. These questions related to income sources, drug procurement costs, involvement in the drug distribution industry, types of drugs used and their monetary value, and sources of legal and illegal income during the preceding 30 days (including bartering goods and/or

services for drugs). The supplemental questions required approximately 30 minutes, and inclusion of these additional questions was the only deviation from the standard Cooperative Agreement process. Respondents were compensated for their time. The final questionnaire was pilot-tested prior to implementation.[4]

Results are presented in this report for drug use patterns of the target samples. While the two target samples of injecting drug users and crack users were appropriate designations for purposes of data collection, results revealed that they fail to distinguish accurately the many specific patterns of crack, cocaine, heroin, and speedball use among respondents. Studies of drug users often categorize individuals by type of drug used; however, because most drug users in this sample used multiple drugs, characterizing the sample composed of crack users and IDUs obscures the reality of their drug use. Thus, there was a need to redistribute the sample into drug use categories that could consider multiple drug use and frequency of drug use.

A drug typology was developed for the Drug Procurement Study to facilitate data analysis. *Exhibit 1* summarizes the drug typology decision rules. The typology is

Exhibit 1. Drug Typology Elaboration
Drug Use in the Past 30 Days

Typology Category[1]	Primary Drug Use	Secondary Drug Use[2]
Crack Only	Crack use ≥ 15 days	No powdered cocaine, heroin, or speedball
Crack Primary	Crack use ≥ 15 days	Possible powdered cocaine, heroin, or speedball use <14 days
Cocaine Primary	Powdered cocaine use ≥ 15 days	Possible heroin use <14 days, possible speedball or crack use 0–30 days
Heroin Primary	Heroin use ≥ 15 days	Possible crack, powdered cocaine, or speedball use 0–30 days
Speedball Primary	Speedball use ≥ 15 days	Possible powdered cocaine or heroin use <14 days, possible crack use 0–30 days
Less Frequent Users	No primary drug ≥ 15 days	Possible crack, powdered cocaine, heroin, or speedball use <14 days

1 This typology focuses on forms of cocaine and heroin and does not include use of other drugs such as alcohol, marijuana, or amphetamines. The hierarchy is imposed as follows: (1) heroin, (2) cocaine, (3) speedball, and (4) crack when more than one drug exceeds 15 days of use in the past 30 days.
2 Most respondents reported the use of one or more secondary drugs in addition to their primary drug during the specified period.

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3 Self-reports have always been an integral component of drug research. Results of research studies indicate a high degree of variability in self-report validity, both within and between studies (Anglin et al. 1993; Skog 1992; Falck et al. 1992; Mieczkowski et al. 1991; Maisto et al. 1990; Magura et al. 1987; Wish and O'Neil 1991; Weatherby et al. 1993).

4 A draft of the drug procurement questionnaire was pilot-tested at three sites (Denver, Detroit, and Long Beach). As a result of the pilot study, several questions were reworded and reformatted, and instructions to the interviewer were improved. No questions were removed or added. A test-retest reliability study of the drug procurement questionnaire was conducted at the three pilot-test sites. Both individual items and composite measures that were used in data reporting were analyzed for their test-retest reliability. These included 45 original items and four composite items measured at baseline and 24 hours later. The observed Pearson correlation coefficients indicate that variables reported here are acceptable measures in terms of test-retest reliability, with reliability coefficients greater than .70 for income and expense-derived variables and greater than .74 for drug use variables. Test-retest correlation analyses indicate that the measures in this study taken from the RBA demonstrate moderate or good reliability. Estimates are based on a reliability study conducted at five Cooperative Agreement sites (N=196). Coefficients ranged from 0.65 to 0.85 for 30-day measures (Needle et al. 1993). An assessment of the validity of respondents' self-reports of their drug use in the past 48 hours was conducted by comparing self-reported drug use (or nonuse) to urine test results. The percentage of agreement is consistently greatest for amphetamines at 98 percent agreement of the self-report to the urine test results (a drug with low prevalence of usage in this sample) and is lower for cocaine (74 percent) and opiate drugs (79 percent) (Weatherby et al. 1993).

based on the recent use of heroin and cocaine in the past 30 days. Six categories of drug users were developed from the data: crack only; crack primary; cocaine primary; heroin primary; speedball primary; and less frequent users who did not use any form of heroin or cocaine more than 15 of the past 30 days. The typology does not include the use of alcohol, marijuana, or amphetamines, since the use of these drugs was relatively consistent across all typology groups. Typology decision rules were developed based on several analyses of the frequency of drug use in the sample that revealed the ability to identify a primary drug for most individuals, the predominance of the use of crack that necessitated a hierarchy that focused on injection drug use, and the emergence of a group of users who did not use heroin or cocaine for 15 or more days in the past 30 days. While the typology is based on recent use, it is consistent with information on the drug acquisition, drug expenditure, and income-generating criminal activity questions that were also based on behavior in the past 30 days. Further, the typology provides an analytical framework that acknowledges the predominance of the use of cocaine and heroin in multiple forms in this population and provides a heuristic approach for analysis.

An examination of the data revealed that, within multiple use patterns, a primary drug could be identified for most respondents by using a midrange cutoff (15 days, or the equivalent of drug use at least every other day during a 30-day period). If a drug was used at least 15 of the last 30

days, it was classified as primary. Some respondents used more than one drug at least 15 of the last 30 days, and these respondents were assigned to a single primary drug category according to a hierarchy of: 1) heroin; 2) cocaine; 3) speedball; and 4) crack.

For instance, a respondent who used both heroin and crack at least 15 of the last 30 days was assigned to the "heroin primary" category; a respondent who used cocaine, speedball, and crack at least 15 of the last 30 days was assigned to the "cocaine primary" category. The hierarchy reduces the effect of the pervasive use of crack in characterizing other important patterns of drug use.[5] Respondents who had used only crack more than 15 of the last 30 days (no powdered cocaine, heroin, or speedball use) were classified as "crack only" users. If no drug was used in 15 days or more, the respondent was classified as a "less frequent" user.

Following elaboration of drug use patterns, results are presented for drug expenditures, drug trade activities, drug acquisition, and income sources. Multivariate analyses were performed to examine characteristics of those who engaged in each of three noncash methods of drug acquisition (drug selling/dealing, trading sex for drugs, and trading goods for drugs), as well as those who reported illegal income from three specific sources (commercial sex, property crime, and drug sale-related crime). Analyses included linear multiple regression, logistic regression, and discriminant analysis.

RESULTS

Drug Use Patterns

The final sample was composed of 1,154 drug users from the 10 sites. The sample included 63 percent male respondents. The race/ethnicity distribution was 64 percent African American, 14 percent Puerto Rican, 9 percent white, 8 percent Mexican/Mexican American, and 4 percent other. The median age of respondents was 36 years of age. Overall, 71 percent of the sample had been in jail and 53 percent had been in drug treatment. Forty-one percent of the respondents reported being employed in the past 30 days.

Figure 1 shows the drug use patterns of the past 30 days for the total sample. Crack use was widespread throughout the sample; more than 78 percent of the respondents reported using crack in the past 30 days.

Figure 1. Consumption Patterns
Heroin and Cocaine Use in the Past 30 Days

Crack only 36.7%
Crack + cocaine 15.6%
Crack + speedball 0.9%
Cocaine only 2.9%
Heroin + speedball 2.9%
Crack + heroin 11.4%
Cocaine + heroin 2.2%
Crack + cocaine + heroin 4.1%
Crack + cocaine + heroin + speedball 7.1%
Cocaine + heroin + speedball 6.0%
Speedball only 1.5%
Heroin only 6.0%
Crack + heroin + speedball 2.7%

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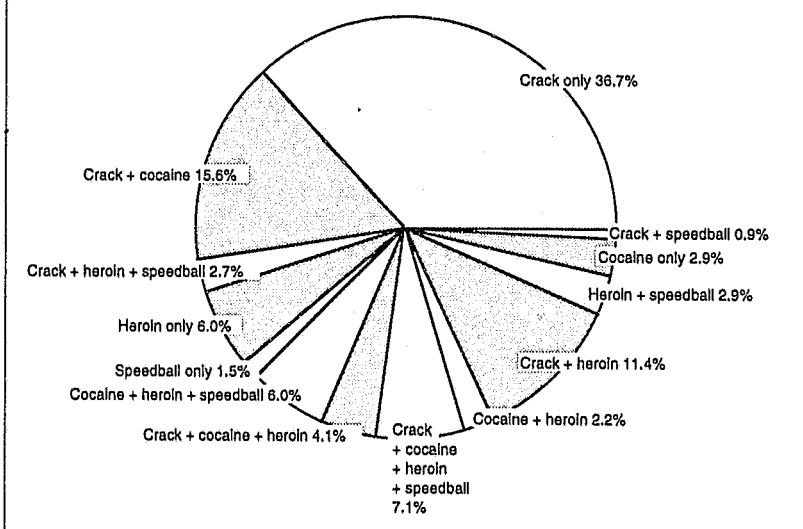
[5] This hierarchy was imposed because of the high prevalence of crack use across all user groups that would have resulted in a predominance of crack primary users if crack had been moved up in the hierarchy. A secondary objective of the hierarchy was to categorize speedball users as either heroin primary or cocaine primary drug users, where respondents' multiple forms of drug use made this appropriate.

Figure 2. Target Sample by Drug Use Patterns
Drug Use in the Past 30 Days

```
        Injection              TARGET              Noninjection
        Drug Users           POPULATION            Drug Users
          56%                                     (Crack Smokers)
         (N=647)                                       44%
                                                     (N=507)

                          DRUGS USED
                          IN THE PAST
                          30 DAYS 1

   Crack   Cocaine    Heroin  Speedball    Crack  Cocaine    Heroin  Speedball 2
    58%      55%        67%      38%        100%     18%        9%       2%
```

DRUG USE PATTERNS		DRUG USE PATTERNS	
Crack, cocaine	17%	Crack only	76%
Crack, heroin	16%	Crack, cocaine	14%
Crack, cocaine, heroin, speedball	13%	Crack, heroin	6%
Cocaine, heroin, speedball	11%	Crack, cocaine, heroin, speedball	1%
Heroin only	11%	Other combinations	3%
Crack, cocaine, heroin	6%		
Cocaine only	5%		
Heroin, speedball	5%		
Cocaine, heroin	4%		
Speedball only	3%		
Other combinations	9%		

1 Percentages for drugs used in the past 30 days (for crack, cocaine, heroin, and speedball use) are not mutually exclusive. Categories and percentages in the drug use patterns are mutually exclusive and, thus, total to 100 percent for each target population.

2 Though the term "speedball" is typically reserved for the injected combination of heroin and cocaine, some respondents used this same term when referring to a snorted or smoked mixture.

Given the extensive use of crack cocaine, results are presented separately for crack cocaine and powdered cocaine. Results are also presented for heroin and speedball. Over half of the respondents in the sample reported using more than one of these distinct drug forms in the last 30 days. However, a significant number of crack users reported no use of powdered cocaine, heroin, or speedball.

Figure 2 further elucidates the use patterns for the target samples of injecting drug users and crack cocaine smokers. Over half of the IDUs in the sample used crack in the past 30 days. The most common use patterns among IDUs were cocaine along with crack use (17 percent) and injection of heroin along with crack use (16 percent). Eleven percent used heroin only, 5 percent used powdered cocaine only, and 3 percent used speedball only. For 76 percent of the crack sample, crack was the only one of the four drugs used. The combination of highest frequency in the crack sample was of crack and pow- dered (noninjected) cocaine (14 percent).

The sample was then distributed into the typology groups described earlier. The crack only and crack primary groups together composed 39 percent of the sample. Nine percent of the respondents in the sample were primarily cocaine users, 27 percent primarily heroin, and 5 percent primarily speedball. Twenty percent were classified as less frequent users because for any drug used, their use was less than 15 of the last 30 days.

It is important to note that in each typology group except the crack only category, the majority of respondents used two or more of the four typology drugs. In fact, except for crack use, rather small percentages of respondents in each group reported using only a single drug. For instance, in the cocaine primary group, only 13 percent reported using only cocaine in the past 30 days, and only 19 percent of respondents classified as heroin primary reported using only heroin. Reports of use of more than one drug almost always included crack in addition to other substances.

Table 1 presents the demographic profile of the typology groups. Women were more likely to be in the crack only group than in the crack primary group or in the other drug groups. Crack primary and crack only users in

Table 1. Demographic Profile of Typology Groups

	Crack Only (N=303)	Crack Primary (N=141)	Cocaine Primary (N=106)	Heroin Primary (N=316)	Speedball Primary (N=55)	Less Frequent Users (N=233)	All Users (N=1,154)
	%	%	%	%	%	%	%
Gender							
Male	56.1	70.9	72.6	64.2	67.3	60.5	63.1
Female	43.9	29.1	27.9	35.8	32.7	39.5	36.9
Race							
African American	80.2	75.2	52.8	50.6	32.7	67.8	64.2
White	4.6	8.5	7.5	15.8	16.4	6.9	9.4
Mexican	1.0	5.0	12.3	9.2	9.1	15.0	8.0
Puerto Rican	9.9	9.9	17.9	21.2	34.5	6.0	14.1
Other Hispanic	2.3	1.4	5.7	1.9	3.6	2.6	2.5
Other	2.0	0.0	3.8	1.3	3.7	1.7	1.8
Age							
18–29	33.0	19.9	15.1	11.4	18.2	23.6	21.2
30–39	48.5	46.8	43.4	39.6	40.0	41.2	43.5
40–49	16.2	27.0	35.8	38.6	32.7	30.9	29.2
50 or older	2.3	6.4	5.7	10.4	9.1	4.3	6.1
Median	*33.0*	*36.0*	*36.5*	*39.0*	*38.0*	*36.0*	*36.0*
Ever in Drug Treatment	40.9	56.0	52.8	72.0	63.6	40.8	53.4
Ever in Jail	66.0	63.1	69.8	83.2	85.5	62.2	70.9
Employed	42.6	45.4	41.5	34.6	40.7	43.8	40.8

this sample were more likely to be African American. In addition, crack only users were the youngest group, with a median age of 33 years and 82 percent under the age of 40. The heroin primary group was the oldest group, with a median age of 39 years and 49 percent over the age of 40.

Percentages for previous drug treatment varied by typology group. Respondents in the crack only group were the least likely of the primary drug groups to have been in drug treatment; they were no more likely than the less frequent users to have been in drug treatment. Those in the heroin primary group were the most likely to have been in drug treatment. Percentages also varied for having ever been in jail, with the highest percentages for the heroin primary and speedball primary groups. These patterns appear to reflect differences in age and length of drug-using careers among the typology groups.

Primary drugs were used very frequently; the use of other drugs was infrequent, with the exception that crack primary users reported frequent use of powdered cocaine. For instance, among those respondents classified as crack primary, 71 percent reported using powdered cocaine between 1 and 14 days of the past 30 days, and 38 percent reported similar levels of heroin use. Similarly, among cocaine primary respondents, 43 percent reported frequent use of crack (15 or more days of the past 30). Within each group, the primary drug had been used at least an average of 23 days per month (the averages were 26 days of crack use for crack primary users, 26 days of heroin use for heroin primary users, 23 days of cocaine use for cocaine primary users, and 24 days of speedball use for the speedball primary group). Analyses were replicated using the level of use of each drug instead of the typology. Findings from these analyses gave evidence of the general validity of the typology.[6]

The drug use typology represents differences among respondents in their use of drugs in the past 30 days. An examination of the long-term use patterns is presented in *table 2*. Results reveal that respondents in the heroin primary group reported the longest association with their primary drug—59 percent of the heroin primary users had been using heroin for more than 10 years. Not surprisingly, large percentages of respondents in the speedball primary group reported longstanding use of both heroin and cocaine.

Respondents in the crack only group and crack primary group reported significantly different long-term experience with powdered cocaine and heroin. Forty percent of respondents in the crack only group reported never using powdered cocaine, and 78 percent reported never using heroin. Among respondents in the crack primary group, only 2 percent had never used powdered cocaine in their lives, and 40 percent reported they had never used heroin. These differences exist despite the fact that the two groups displayed similar crack use histories, with median years of crack use of 6 and 7 years, respectively.

Table 2. Drug Use History of Typology Groups

	Crack Only (N = 303)	Crack Primary (N = 141)	Cocaine Primary (N = 106)	Heroin Primary (N = 316)	Speedball Primary (N = 55)	Less Frequent Users (N = 233)	All Users (N = 1,154)
	%	%	%	%	%	%	%
Years Using Crack							
Never Used	0.0	0.0	26.4	23.7	21.8	16.7	13.5
<1	1.0	5.0	7.6	15.5	49.1	7.8	9.6
1-5	47.5	39.7	34.9	37.0	21.8	51.9	42.2
6-10	41.3	41.8	25.5	19.3	5.5	21.0	28.1
11+	10.2	13.5	5.7	4.4	1.8	2.6	6.7
Median (years)	*6.0*	*7.0*	*3.0*	*2.0*	*0.0*	*3.0*	*4.0*
Years Using Cocaine							
Never Used	40.4	2.1	0.0	10.8	0.0	22.3	18.5
<1	33.0	7.8	4.8	26.9	14.5	21.0	22.5
1-5	13.6	27.0	17.1	19.9	29.1	23.6	20.1
6-10	7.0	30.5	31.4	13.9	25.5	14.6	16.4
11+	6.0	32.6	46.7	28.5	30.9	18.5	22.8
Median (years)	*0.0*	*9.0*	*10.0*	*4.0*	*7.0*	*1.0*	*3.0*
Years Using Heroin							
Never Used	78.5	40.4	34.0	0.0	0.0	48.5	39.5
<1	15.5	14.2	11.3	15.2	20.0	14.6	13.8
1-5	2.6	15.6	13.2	13.0	20.0	10.7	10.5
6-10	1.0	6.4	10.4	12.7	18.2	7.7	7.9
11+	2.3	23.4	31.1	59.2	41.8	18.5	28.3
Median (years)	*0.0*	*0.0*	*1.5*	*15.0*	*8.0*	*0.0*	*0.0*

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6 Overall results indicate that the typology has considerable face validity based upon the frequency of drug use. Less frequent consumption (between 1 and 14 days in the past 30 days) was reported by small percentages of respondents in each category. The single exception to this is the high percentage of respondents in the crack primary category who reported the use of powdered cocaine. There are at least three possible reasons for this association between frequent cocaine use and frequent crack use. First, since the effects of smoking, snorting, or injecting cocaine are somewhat similar in type, if not degree, users may frequently switch back and forth between these routes of administration. Second, sources for obtaining powdered cocaine may be the same as or overlap with sources for crack cocaine, making both forms readily available to users of each. Finally, users of crack cocaine may themselves be involved in processing powdered cocaine into rock form and, thus, have access to both forms.

An examination of the use of marijuana, other opiates, and amphetamines was performed to examine the possibility of misclassification within the drug typology due to heavy use of drugs other than cocaine or heroin. Results revealed that marijuana use is relatively consistent across all groups, with less than 10 percent of the sample overall reporting heavy use of marijuana (15 or more days used in the past 30 days). Very few respondents reported heavy use of other opiates or amphetamines; the only occurrence of heavy use was reported by heroin primary respondents, of whom 10 percent reported using opiates 15 or more days and 8 percent reported using amphetamines 15 or more days in the past 30 days. These results are consistent with study eligibility criteria of active crack or injection drug use and further support the face validity of the drug use typology that focuses on forms of cocaine and heroin use. '

While some respondents in the cocaine primary group reported longstanding use of crack and/or heroin, many more appeared to have only recently begun using these drugs. Compared with a median 10 years of cocaine use, these respondents reported medians of 3 years of crack use and 1.5 years of heroin use. Twenty-six percent reported having never used crack, and 34 percent reported having never used heroin.

Some respondents classified as less frequent users on the basis of their drug use in the past 30 days reported drug use histories of many years. More than 23 percent had used crack for at least 6 years or longer, 33 percent had used cocaine for 6 years or longer, and 26 percent had used heroin for 6 years or longer.

Drug Expenditures

Expenditures for drugs in the past 30 days in this sample varied from zero (for those obtaining drugs solely by barter acquisitions or for free) to $12,000. Overall, more than two-thirds of the sample reported spending more than $200 in the past month for drugs, more than one-third of the sample reported spending more than $500, and almost one-fifth of the sample spent more than $1,000.

Examining expenditures for drugs as a proportion of total expenditures in the past 30 days, the median proportion of total month expenditures spent on drugs was almost

Figure 3. Drug Expenditures by Days of Primary Drug Use Drug Use in the Past 30 Days (N=1,023)
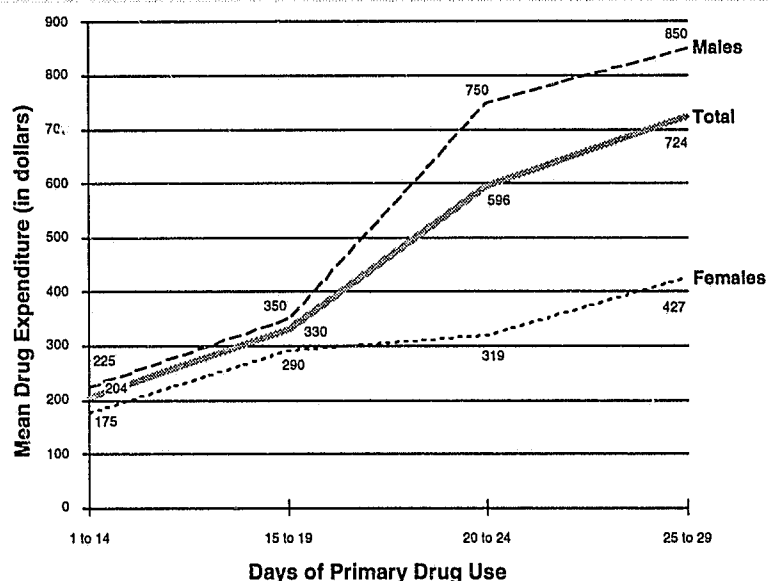
two-thirds of all expenditures. Most respondents spent at least half of their monthly outlay on drugs, and for almost 40 percent of the sample, three-quarters of their month's expenditures were for drugs. For 8 percent of the sample, the only expenditures reported for the past 30 days were for drugs.

Figure 3 displays the relationship of drug expenditures to the number of days of primary drug use.[7] Clearly, as the frequency of primary drug use increases, the amount of expenditures for drugs in the past 30 days increases in this sample. Overall, men were likely to spend more than women on drugs, particularly those at higher drug use levels.

Table 3 summarizes the expenditures for drugs for the typology groups. The heroin primary group reported the highest monthly expenditure for drugs. As expected, the lowest reported expenditure for drugs was in the less frequent user group. While differences across groups exist, given the skewed nature of the data, it is important to stress the relative consistency across all user groups of large expenditures f r drugs in the 1-month period.
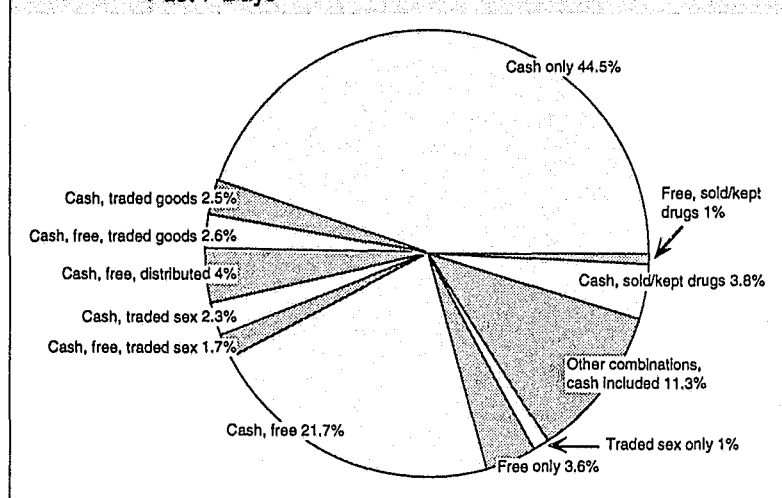
Table 3. Drug Expenditures by Typology Group

	Crack Only (N=303)	Crack Primary (N=141)	Cocaine Primary (N=106)	Heroin Primary (N=316)	Speedball Primary (N=55)	Less Frequent Users (N=233)	All Users (N=1,154)
	%	%	%	%	%	%	%
EXPENDITURE FOR DRUGS							
None	3.4	4.3	5.0	6.6	7.4	10.9	6.3
$1–99	13.0	7.2	7.9	10.2	7.4	28.4	14.2
$100–199	16.3	8.0	5.9	7.6	11.1	17.9	12.1
$200–499	32.7	35.5	36.6	24.8	25.9	31.0	30.6
$500–999	19.4	22.5	23.8	21.8	22.2	7.0	18.4
$1000+	14.3	22.5	20.8	29.0	25.9	4.8	18.5
Median	*$300*	*$400*	*$400*	*$500*	*$400*	*$130*	*$300*
% OF TOTAL MONTH EXPENDITURES SPENT ON DRUGS							
None	3.1	3.0	5.0	6.3	5.8	9.0	5.4
1–24%	10.6	4.4	8.0	7.0	7.7	20.6	10.5
25–49%	17.5	23.7	15.0	13.0	11.5	27.4	18.5
50–74%	31.8	33.3	24.0	30.3	25.0	25.6	29.3
75–99%	28.4	31.1	33.0	37.7	32.7	12.1	28.6
100%	8.6	4.4	15.0	5.7	17.3	5.4	7.6
Median	*64.8*	*64.9*	*71.9*	*69.8*	*74.6*	*42.1*	*63.2*

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7 For each individual, a measure of days of primary drug use was computed. For example, for heroin primary users, the days of heroin use in the past 30 days were used and for cocaine primary users, the days of cocaine use in the past 30 days were used. For the less frequent users, the number of days using the most frequent drug was used for computing days of primary drug use. This measure was used in subsequent multivariate analysis to examine the relationship of intensity of primary drug use to outcome measures.

Figure 4. Drug Acquisition Patterns Past 7 Days

Overall, 32 percent of respondents reported being involved in any drug-related activities in the past 30 days. The most common activity reported was selling drugs to a nondealer (22 percent), followed by finding buyers (16 percent), steering (10 percent), and holding money or drugs (10 percent). Eight percent of the sample indicated being involved in cutting, packaging, or cooking drugs, 8 percent reported selling or renting pipes/works/rigs, and 9 percent provided other drug users with a place to use drugs.

Comparing the typology groups, the crack primary users were the most likely to report involvement in drug-related activities. Relatively high percentages of the crack primary group were involved in finding buyers for drug dealers (25 percent), cutting, packaging, or cooking drugs (13 percent), or selling/renting paraphernalia (14 percent). Respondents in the heroin primary group were the most likely to have sold to street dealers.

Although respondents reported spending significant sums of money for drugs, many respondents had obtained drugs in ways other than cash acquisitions in the past 7 days. *Figure 4* elaborates the drug acquisition patterns of the respondents in the past 7 days. Overall, 45 percent indicated that they had paid cash only and 49 percent had used cash in some combination with another medium of exchange. Only 7 percent of the sample reported no cash acquisitions of drugs in the past week; these respondents relied solely on getting drugs for free, trading sex, or accessing drugs by selling drugs. Notably, 41 percent of the sample indicated acquisition combinations that included obtaining drugs for free. Fifteen percent of the respondents reported combinations that included selling drugs while keeping what they needed; 16 percent had traded/fenced goods to get drugs. Eight percent had received drugs for distributing drugs. Two percent reported that they had stolen drugs.

Comparing respondents by typology group, respondents in the crack only and crack primary groups were more likely than other respondents to indicate trading sex for drugs. These respondents were also more likely to report receiving drugs for free or obtaining drugs as a result of making (processing) or distributing drugs. This is consistent with these respondents' access to markets for both powdered and crack cocaine.

Drug Trade

For many respondents, the acquisition of drugs was facilitated by their direct involvement in various aspects of the drug trade, such as the preparation of drugs for sale, the actual sale and distribution of drugs, and other drug market activities. These results are presented in *table 4*.

Drug Acquisition

The majority of respondents (72 percent) indicated that drugs were easy to obtain in the past 30 days. Of the 28 percent who indicated any difficulty in obtaining drugs, the most common reasons included having no money (59 percent), difficulty in finding a source (27 percent), supply shrinkage (25 percent), and increased policing (18 percent). Some respondents indicated an increase in drug users in the area (8 percent) or the increased cost of drugs (4 percent) as reasons for difficulty. Women were slightly more likely than men to indicate that they had encountered difficulty in

Table 4. Drug Sale-Related Activities Past 30 Days

	Crack Only (N=303) %	Crack Primary (N=141) %	Cocaine Primary (N=106) %	Heroin Primary (N=316) %	Speedball Primary (N=55) %	Less Frequent Users (N=233) %	All Users (N=1,154) %
Any Drug-Related Activity	30.7	38.3	29.2	33.5	23.6	30.0	31.8
Selling Drugs to Another Person (Not a Dealer)	21.9	24.1	17.0	23.3	22.2	18.9	21.5
Finding Buyers	13.0	25.5	18.9	15.3	5.6	17.2	16.2
Steering	7.6	15.6	9.4	11.2	3.7	7.3	9.5
Holding Drugs or Money	7.3	18.4	10.4	9.3	1.9	8.6	9.5
Providing Space	9.0	9.9	12.3	8.6	3.7	6.9	8.6
Cutting, Packaging, or Cooking Drugs	7.0	12.8	3.8	8.9	5.6	5.2	7.5
Selling or Renting Pipes/Works/Rigs or Other Paraphernalia	7.0	14.2	10.4	6.1	5.6	5.2	7.5
Selling Drugs to Street Dealers	3.0	6.4	4.7	7.7	3.7	4.7	5.2
Providing Street Security	4.0	7.1	4.7	5.1	3.7	1.3	4.2

obtaining drugs. Thirty-one percent of the women and 26 percent of the men indicated any difficulty in obtaining drugs in the past 30 days.

Since having no money was reported so often as the principal obstacle to drug acquisition, a series of detailed multivariate analyses was conducted to determine the factors associated with three noncash drug acquisition behaviors: drug selling/dealing, trading sex for drugs, and trading goods for drugs. Respondents were asked whether they had engaged in any of these activities in the last 30 days as a means to obtain drugs. Overall, 18 percent of the sample had engaged in drug selling/dealing, 5 percent had traded sex for drugs, and 6 percent had traded goods for drugs.
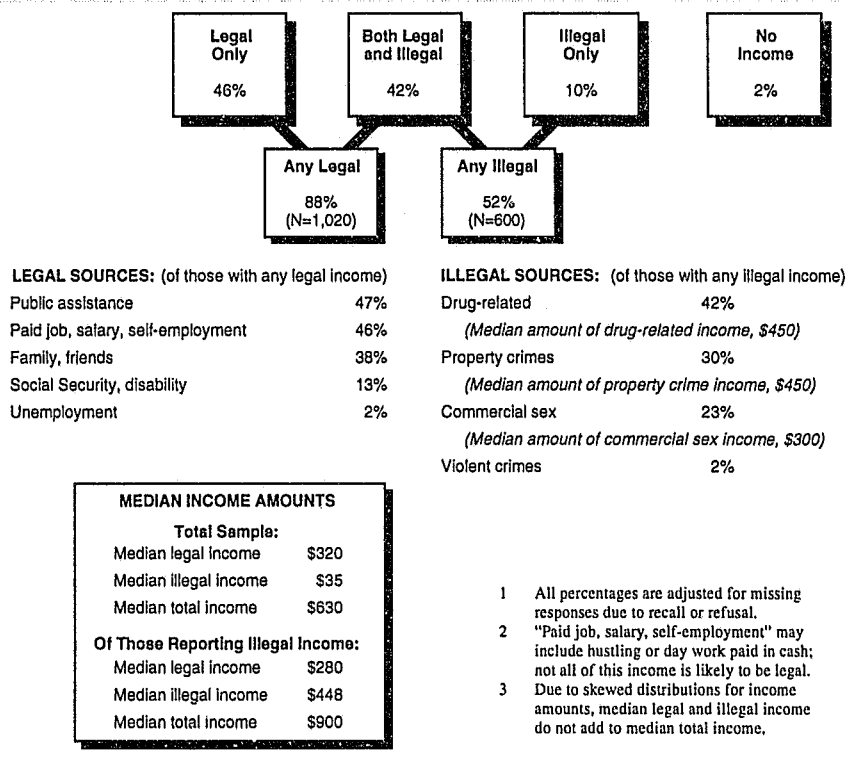
Linear multiple regression, logistic regression, and discriminant analyses consistently yielded several findings.[8] First, respondents who found drugs difficult to obtain in the last 30 days were more likely than others to report having engaged in selling/dealing drugs or in trading goods in order to obtain drugs for themselves (which is consistent with the finding that a lack of cash was the most frequently cited obstacle to acquiring drugs). Second, respondents with higher levels of drug use were more likely than others to report engaging in drug selling/dealing. Third, respondents in the crack only and crack primary categories were more likely than others to report trading sex for drugs.

Income and Criminal Activities

In this sample, income was derived from a variety of sources. Most respondents had some legal sources of income (88 percent). Half of the respondents (52 percent) reported having some illegal income. Forty-six percent of the sample derived income from legal sources only in the past 30 days; 42 percent reported both legal and illegal sources. Ten percent of the sample indicated that all of their past month's income was derived from illegal sources. Two percent of the sample indicated that they had no income in the past 30 days.

Results for income amounts are presented in *figure 5* and income sources in *table 5* (page 12). Of those reporting legal income (N=1,020), the most common sources reported

Figure 5. Income Amounts[1,2,3]
Past 30 Days (N=1,154)

Legal Only 46%	Both Legal and Illegal 42%	Illegal Only 10%	No Income 2%

Any Legal 88% (N=1,020)

Any Illegal 52% (N=600)

LEGAL SOURCES: (of those with any legal income)

Public assistance	47%
Paid job, salary, self-employment	46%
Family, friends	38%
Social Security, disability	13%
Unemployment	2%

ILLEGAL SOURCES: (of those with any illegal income)

Drug-related	42%
(Median amount of drug-related income, $450)	
Property crimes	30%
(Median amount of property crime income, $450)	
Commercial sex	23%
(Median amount of commercial sex income, $300)	
Violent crimes	2%

MEDIAN INCOME AMOUNTS

Total Sample:

Median legal income	$320
Median illegal income	$35
Median total income	$630

Of Those Reporting Illegal Income:

Median legal income	$280
Median illegal income	$448
Median total income	$900

1 All percentages are adjusted for missing responses due to recall or refusal.

2 "Paid job, salary, self-employment" may include hustling or day work paid in cash; not all of this income is likely to be legal.

3 Due to skewed distributions for income amounts, median legal and illegal income do not add to median total income.

included public assistance (47 percent), work-related income (46 percent), and family/friends (38 percent). Of those reporting illegal income sources (N=600), the most common sources included drug-related income (42 percent) and property crime income (30 percent). The most common sources of property crime income included shoplifting and panhandling.

Legal sources were common to all groups and highest for less frequent users. Illegal income was most evident among crack primary and cocaine primary users. Drug trade was relatively consistent across typology groups. Cocaine primary users were most likely to report property crime income. Very few respondents reported engaging in violent crime. Slightly more than 4 percent of speedball users reported income from violent crime; no other category of users exceeded this percentage. None of the less frequent drug users reported such income. Total median income for the sample was $630 in the past 30 days, with the bulk derived from legal sources. Highest median total income was reported by respondents in the heroin primary, crack primary, and cocaine primary groups. These three groups also reported the highest median illegal income.

8 Several levels of analyses were conducted to examine relationships based on frequency of drug use and on typology group assignment in order to elaborate consistent multivariate findings. Results reported were consistent using multiple analytical techniques.

Table 5. Income Sources by Typology Group Past 30 Days

	Crack Only (N=303)	Crack Primary (N=141)	Cocaine Primary (N=106)	Heroin Primary (N=316)	Speedball Primary (N=55)	Less Frequent Users (N=233)	All Users (N=1,154)
	%	%	%	%	%	%	%
INCOME SOURCES							
Legal Only	48.2	34.8	36.8	41.1	50.9	59.7	46.0
Both Legal and Illegal	41.9	54.6	50.9	42.7	36.4	32.6	42.4
Illegal Only	8.9	7.1	10.4	14.6	10.9	4.7	9.6
No Income	1.0	3.5	1.9	1.6	1.8	3.0	2.0
LEGAL SOURCES							
Job/Self-Employment [1]	42.6	45.4	41.5	34.6	40.7	43.8	40.8
Supplemental Security Income	3.0	2.8	4.7	3.5	3.7	7.3	4.2
AFDC/Food Stamps	36.3	45.4	38.7	40.0	24.1	43.8	39.6
General Assistance	10.2	12.1	5.7	10.5	14.8	9.9	10.2
Spouse/Family Support	41.6	28.4	39.6	34.0	37.0	37.8	36.7
Other Legal Sources	11.9	14.9	11.3	11.1	13.0	9.9	11.6
ILLEGAL SOURCES							
Drug-Related Crimes							
Drug Trade	25.4	26.2	17.9	26.9	23.6	17.6	23.6
Property Crimes							
Panhandling [2]	12.5	17.0	10.4	9.8	16.4	7.7	11.4
Numbers Running	3.6	3.5	8.5	5.4	1.8	5.6	4.9
Con Games	5.6	5.0	4.7	4.4	0.0	1.7	4.1
Shoplifting	5.6	7.8	26.4	16.8	10.9	7.3	11.4
Theft-Motor Vehicle	1.0	2.8	2.8	3.2	7.3	1.3	2.3
Pick-Pocketing/ Purse-Snatching	0.7	1.4	0.9	3.5	0.0	0.0	1.4
Buying/Receiving Stolen Property	6.6	7.8	5.7	6.0	9.1	3.4	6.0
Breaking/Entering	0.9	1.8	2.2	0.9	2.2	1.2	1.3
Commercial Sex							
Prostitution	13.9	14.9	9.4	13.9	12.7	3.4	11.4
Pimping, Commercial Vice	3.0	2.8	1.9	1.6	0.0	1.3	2.0
Violent Crime							
Mugging, Armed Robbery, Bank Robbery	1.3	0.9	1.1	1.7	4.4	0.0	1.3

1 "Job/self-employment" may include hustling or day work paid in cash; not all of this income is likely to be legal.
2 Panhandling may not be illegal at all sites; however, it is included in analysis within the illegal income sources.

Men and women were very similar in terms of percentages reporting legal income, illegal income, or a combination of legal and illegal income. However, more than half of the men had legal income derived from employment, compared with 23 percent of the women. Women were somewhat more likely than men to report receiving financial aid from a spouse or family. Differences between men and women occurred in the sources of illegal income as well. Women were much more likely than men to report deriving income from commercial sex. Men were more likely to report a variety of illegal income sources, such as involvement in the drug trade, numbers running, shoplifting, motor vehicle theft, and buying or receiving stolen goods.

Linear multiple regression, logistic regression, and discriminant analyses were used to identify other factors associated with receiving income from drug sale-related activities, from commercial sex, or from property crimes. Results across analytical methods were consistent in showing several findings. First, for each of the three, the likelihood of illegal income was greatest among respondents with higher levels of drug use. Second, respondents who reported that drugs were difficult to obtain were more likely than others to report illegal income from drug dealing/selling, commercial sex, or property crimes. Third, respondents in the cocaine primary category were more likely than others to report illegal income from property crimes or drug selling/dealing. Fourth, women were as likely as men to report illegal income, although they were more likely than men to be involved in commercial sex. Finally, respondents in the crack primary category were more likely than others to report deriving illegal income from commercial sex.

LIMITATIONS AND DATA INTERPRETATION

Several factors potentially diminish the generalizability of these findings. The sample, although geographically diverse, may not be representative of the national population of drug users nor of the 10 geographic areas from which the sample was taken, since the universe of characteristics of chronic drug users and the distribution of these characteristics are unknown. The availability and accessibility of respondents recruited within the sampling frame at each site have been affected by seasonal factors and other factors related to targeted sampling designs. This has important implications for how the data can be interpreted.

The preponderance of males (63 percent) and African Americans (64 percent) in the sample does not imply corresponding distributions in the population of out-of-treatment drug users.

Nevertheless, these data provide some basis for generalizations regarding perceived relationships between demographic characteristics and patterns of drug use or other illegal activity. For instance, this sample suggests several broad tendencies in *drug use patterns* among chronic injecting drug users or crack users according to

gender or race: women are more likely to be in the crack only group than in the crack primary group; it is reasonable to conclude that chronic drug use among women differs from chronic drug use among men in that it more frequently develops around crack *exclusive of other drugs* (and exclusive of cocaine in other forms); African Americans are more likely to be in the crack only, crack primary, or infrequent user groups; and Puerto Ricans are more likely to be in the cocaine primary or speedball groups. However, even these simple assertions must be made cautiously in the context of a nonprobability sampling design. To a significant degree, the limited generalizability of these findings is offset by the advantages of incorporating a rapid response design within the structure of an existing education and intervention assessment project.

Issues related to self-selection and nonresponse should also be acknowledged. It is likely that there is some impact of refused responses but its extent cannot be fully ascertained. The reliability of self-reported data is dependent on the accuracy of the respondent's recall as well as the rapport established with the respondent by the interviewer. The risk entailed in disclosing recent illegal activity (such as property or violent crimes) makes it likely that at least some respondents underreported these activities. In this regard, these data suffer the same limitations that affect the broad base of surveys of criminal activities.

Finally, it should be noted that respondents from some sites are unevenly distributed across the typology categories. For example, the speedball primary group contains disproportionately more respondents from Puerto Rico and Long Beach, which results in a greater number of Hispanics of Puerto Rican origin in this category. Similarly, more than one-third of the respondents in the crack only group are from Miami, and more than one-third of the respondents in the cocaine primary group are from New Orleans. Other sites are proportionately well distributed across typology categories.

Results described in this report provide a detailed characterization of the patterns of drug use, drug procurement, and related illegal activities of chronic, out-of-treatment, noninstitutionalized drug users. While the data do not provide a basis for inferences to other types of drug users or drug users in general, they constitute an important piece in understanding the connections between drug use and other illegal activities.

CONCLUSIONS

This study provides an opportunity to examine the understudied, hidden population of noninstitutionalized, out-of-treatment, chronic drug users. Data collected from 10 cities across the United States provide a broad-based characterization of relevant behaviors among these drug users. While the data do not provide the opportunity for estimating prevalence outside of the specific population from which subjects were recruited, several conclusions can be drawn that have policy implications.

Results indicate that the majority of this sample can be identified as chronic, heavy drug users with long-term use patterns. Even though more than half of the respondents had been in drug treatment, the majority of respondents continued to use cocaine and heroin in high frequency. The use of the primary drug was very frequent in the 30-day period studied, with the average respondent using the primary drug at least 23 days.

Although there was considerable variation in the use of primary drugs (powdered cocaine, heroin, speedball, crack), the use of cocaine, particularly in the form of crack, was pervasive in the aggregated sample across all primary drug user groups. Even within the targeted population of injecting drug users, crack use was reported by 58 percent of the IDUs. In addition, multiple forms of heroin and cocaine use were common to all user groups and multiple forms of use almost always involved the use of crack.

There was an all-encompassing economic impact of drug use on the lives of most of the users in this study. Clearly, drug use was the dominant economic reality for these individuals. The median amount of money spent on drugs in the sample represents more than two-thirds of the total dollars spent by the typical respondent. Those who reported more than 25 days of primary drug use reported spending, on average, more than $724 in the past 30 days for drugs. Thus, it is clear that the quest to find money to pay for drugs was a pervasive factor in the lives of these users.

The majority of respondents reported that drugs were easily acquired when cash was available. While the use of cash or cash in combination with other means were most common, other acquisition forms reported included obtaining drugs for free, trading sex for drugs, and selling drugs to acquire drugs for personal use. During times of drug acquisition hardship, most respondents indicated a lack of cash as the primary reason rather than a lack of availability of drugs.

More than half of the respondents in this sample had turned to income-generating illegal activities in the past 30 days. Of these individuals, 42 percent were involved in some form of drug-related activity, with much of this activity directly involved in selling or in directing persons to sellers. Thus, in the 30-day period studied, the street

drug industry provided significant employment activities for these users.

These data reveal several significant differences between male and female chronic drug users. On average, the women in this sample were younger than the men. They were also more likely than men to be in the crack only or the less frequent user categories. In terms of income sources, women were more likely than men to report legal financial support other than wages, such as public assistance or support from family. Women reported deriving more illegal income than men from commercial sex. Women reported spending less than men on drugs, both in terms of number of dollars and in terms of the proportion of their total expenditures. Finally, women in the sample were less likely than men to have ever been in jail.

While the data reveal these differences between men and women in the sample, they also show several similarities. Men and women who injected drugs were similar in terms of the frequency of injection. Also, men and women were equally likely to report having been in drug treatment. Finally, the overall likelihood of reporting income-generating criminal activity in the past 30 days was the same for men and women.

The results of this study support previous findings reported by Reuter et al. (1990) that many drug users engage in legitimate employment while engaging in drug-related income activities. Infrequent users in this sample were the most likely to indicate sources of legal income. Results also support previous work by Hunt et al. (1984 and 1986), who have reported on the relationship of escalating cocaine use with increased property crimes. In this sample, cocaine primary users were the most active in property crimes. Further, similarities found in this study between men and women in terms of the likelihood of reporting illegal income are consistent with those reported by Hser et al. (1990).

IMPLICATIONS

The Office of National Drug Control Policy recently stated in an interim report on *Breaking the Cycle of Drug Abuse* that "the principal drug problem today lies with chronic drug use" (ONDCP 1993). Previous efforts have focused attention on the casual or intermittent user. Strategies targeted to chronic drug users take on added importance in light of the fact that drugs are generally easy to obtain, despite major commitments to supply reduction strategies. The data from this study indicate that there is considerable variation in the population of users classified as chronic. Attention must focus on the chronic users, on those whose drug-using behavior is an indication that progression to daily use of drugs is likely (those we referred to as "less frequent users"), and on crack users who do not report using other drugs or injecting drugs.

Historically, drug use control efforts and policies have been aimed at reducing both the supply of and demand for drugs. Supply reduction programs—eradication of crops, disruption of smuggling routes and distribution networks, interdiction or seizure of drugs at U.S. borders and warehouse/distribution centers, and strong law enforcement and criminal justice system responses against producers, importers, distributors, and users—attempt to lower drug use by making drugs more expensive or more difficult to obtain. Demand reduction programs—including education about the consequences of illicit drug use—aim to lower drug use directly by changing the behavior of current and potential drug users. While both types of efforts are needed in the control of drug use, this study shows that drugs are generally easy to obtain, suggesting the need for an increased focus of attention on demand reduction. Even when drug procurement is difficult—mostly due to a lack of cash, not a scarcity of drugs—users either barter for drugs or simply do without until more cash is available, and then immediately resume old patterns of drug use.

A major effort at reducing drug demand should involve drug treatment. About a million persons are not receiving treatment because of a limited number of treatment slots (ONDCP 1993). Of the participants who have entered the Cooperative Agreement Program, 56 percent have previously had drug treatment. This may result in part from the fact that many treatment programs do not adequately address the issue of multiple drug use, which is an inherent aspect of chronic drug use. The quality and accessibility of treatment must be considered in planning responsive services for this population. Research clearly needs to continue to experiment with potentially effective treatments for cocaine and crack use. Health services research on demand, utilization, and cost-effectiveness of providing treatment is also necessary.

Clearly, there is a need for engaging and maintaining chronic drug users in treatment. Treatment services must be sensitive to culture- and gender-related concerns in recognizing the full scope of drug use causal factors as well as the needs, including economic and social support circumstances, of clients, particularly women with children. The results of this study reveal that a significant number of women are involved in drug use, particularly the recently emergent crack cocaine use. Reducing drug use among

women should therefore be a major focus of expanded demand reduction strategies. Treatment services delivered in nontraditional settings (e.g., mobile treatment services taken into the community) and nontraditional forms (e.g., early intervention drug education, HIV transmission education, training in partner negotiation skills, and accessing health and social services) should be included as components of a total drug treatment program. In fact, the definition of treatment should be broadened to take into account less formal types of self-help services within the community.

A significant number of persons involved in this study reported having been involved with the criminal justice system. While more than 71 percent of the respondents indicated that they had been in jail, this did not stop their return to drug use activities after release. Reducing the demand for drugs among drug-involved criminal justice clients is important. Appropriately defined populations of drug-involved offenders should be referred to treatment for minimum lengths of stay to ensure treatment effectiveness. Again, indigenous community workers, either as part of the treatment system or the general social service system, should be more available and visible to help in reinforcing behavior modification learned in treatment settings. Resources should also be expanded to ensure the availability of publicly supported treatment.

Although demand reduction programs appear to be critically important to confronting drug problems today, the public health consequences, violence, crime, and HIV risk associated with chronic drug use require that thought be given to broadening policy options and program initiatives. Because chronic drug users often do not seek drug treatment, often do not remain in treatment, are involved in criminal activities, and continue to place themselves and others at high risk of acquiring and transmitting HIV, a strategy based on the newly emerging concept of harm reduction could be a possible complement to other approaches. The harm reduction approach aims "to create a situation that greatly reduces the risk that the addict harms himself or his environment" (van Ameijden et al. 1992).

The harm reduction perspective focuses on the harmful consequences of drug use, rather than focusing on the drug use itself. Harm reduction efforts are concerned with reducing harmful effects, of which reducing drug use may be the only means. For many types of drug-related harm, however, it is possible to reduce at least some portion of the harm without eliminating or reducing drug use; for example, the reduction of multiperson use of injection equipment substantially reduces the risk for HIV infection regardless of whether injection drug use is reduced. Harm reduction is an approach that emphasizes attainable short-term goals and multiple, complementary solutions that operate simultaneously. Since the complete elimination of illicit drug use is extremely unlikely, the harm reduction approach provides a basis for designing innovative approaches for interventions with out-of-treatment drug users that are responsive to usage patterns and consequences of drug use.

Of those respondents in this sample who received HIV antibody testing, 12 percent were seropositive. Drug prevention/education programs that inform potential and current users about the harmful consequences of illicit drug use should be an integral part of responsive public health policies. NIDA Community Research Branch studies indicate that indigenous, community-based outreach workers, who may be recovering drug abusers, are effective agents for recruiting out-of-treatment active drug users into prevention and treatment programs, as well as being supportive agents to reinforce prevention and treatment practices. Of the 45,466 IDUs recruited into NIDA's National AIDS Demonstration Research (NADR) study, 14,974 (32.9 percent) entered formal treatment or self-help programs during the 6 months after receiving interventions. (For a detailed review, see National Institute on Drug Abuse 1993.) Unpublished preliminary followup data from the Cooperative Agreement National Database of September 30, 1993, show a reduction in self-reported borrowing of used needles or syringes from 44.6 percent to 21.4 percent after receiving an AIDS prevention and education intervention.

This study was possible because NIDA has supported development of a community-based research infrastructure that can readily respond to emerging drug-related issues, trends, and consequences and mobilize epidemiologists, ethnographers, and evaluation research personnel to monitor and assess problems of drug use and its consequences across the country. The ONDCP recognizes the importance of improving data collection and research efforts to obtain the best information for policymaking and monitoring policy. Community-based field stations, taking advantage of the existing research infrastructure, should be considered.

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Appendix. Selected Background Resources

Heroin and Crime References:

Ball 1993	Compares heroin addicts in New York, Philadelphia, and Baltimore and finds similar crime rates. Most common crimes were shoplifting, fencing stolen goods, numbers racket, and drug trade involvement. Over half of addicts in each city report involvement in crime on 300+ days in previous year.
Caplowitz 1976	Reports that for at least some heroin users, primary income source was legal.
Faupel 1988	Some support found for hypothesis that increased employment is associated with decreased criminality. Drug use and criminal activity may be spurious concomitants of the subculture in which they occur.
Faupel and Klockars 1987	Explores relationship of drug use and criminal activity over the life career of heroin users. Concludes that the proposed hypothesis concerning the financial burden of heroin use and the subculture of use that supposedly promotes criminal activity apply only during some periods of the drug use career.
Hser et al. 1990	Data from 328 female methadone patients show association between narcotics use and property crime and drug dealing. Replicates earlier findings for male addicts, but for males, property crime and drug dealing were negatively contemporaneously related with low levels of prostitution.
Hunt et al. 1984	In-treatment methadone clients and not-in-treatment heroin users report comparable levels of criminal activity, though serious crime such as robbery, burglary, or drug dealing is lower among in-treatment subjects. Frequent cocaine users report higher rates of property crime and drug dealing than those who used cocaine less frequently.
Inciardi et al. 1982	Examines criminal activity among African American female heroin users. Results suggest that criminal activity frequently precedes expensive drug use, thereby questioning the causal link between drugs and supposed resulting crime.
Johnson et al. 1985	Heroin users report high levels of involvement in robbery, burglary, and shoplifting but lower levels of involvement in drug trade activities.
Kowalski and Faupel 1990	Data from 768 subjects suggest that heroin users typically engage in one or two "main hustles" from which they derive the majority of their criminal income. Also suggests that variety of criminal activity is greatest among daily users of heroin.
Nurco et al. 1991	Two hundred and fifty male methadone patients were categorized as to criminal behavior: type, severity, and amount. Authors derive nine categories of criminal involvement.
Speckart and Anglin 1986	Findings suggest that criminality increases following addiction to heroin and a shift to more serious crime occurs as addiction level increases. Dealing drugs is often preferred and replaces/obviates the need for other types of crime.

Cocaine and Crime References:

Feucht 1991	Using urinalysis, shows that women arrested for prostitution are more likely than other female arrestees to test positive for cocaine.
Goldstein 1985, 1986, 1989	Develops a tripartite categorization linking cocaine and violent crime. Reports that a substantial portion of violent crime is linked to psychopharmacological properties of cocaine.
Goldstein et al. 1993	Examines violent crime and cocaine. Links violent crime to amount of cocaine use but not to frequency of cocaine use.
Harrison and Gfroerer 1992	National Household Survey data show a relationship between cocaine use and greater likelihood of violent crime activity and a strong link between property crime and violent crime.
Hunt et al. 1984	Frequent cocaine users report greater involvement in property crime than do less frequent users.
Hunt et al. 1986	Shows increasing cocaine use among methadone clients. Cocaine use is associated with increased criminal activity. Authors suggest this is a result of psychopharmacological properties of the drug, cost of the drug, and lifestyle associated with cocaine use.
Inciardi and Pottieger 1986	Compares 1977-1978 and 1983-1984 cohorts of drug-using women. Most frequently reported crime in later cohort is vice (prostitution), with substantial involvement in drug sales and theft.
Simonds and Kashani 1980	Links cocaine consumption to violent crime among juvenile males.

Crack and Crime References:

Fagan and Chin 1993	Reports that before the onset of crack use, many crack users are involved in crime that is unrelated to drugs.
Inciardi et al. 1993	Among crack-using women, more report drug trade crimes and petty property crimes (76 and 77 percent, respectively) than prostitution (49 percent). Likelihood of violent offenses, major property crimes, and prostitution is higher with heavier crack use.
Inciardi and Pottieger 1993	In a study of 254 crime-involved juveniles, daily crack users were more likely to be heavily involved in crack distribution; conversely, big-level dealers of powdered cocaine tended to be occasional users. Daily powdered cocaine users were rarely dealers.

Other References:

Grapendaal 1992	Reports that the use of drugs is elastic and depends more upon the availability of funds than on physical need.
Johnson et al. 1988	Among heroin and cocaine users, illegal income, particularly income from robbery, is spent primarily on drugs.
Reuter et al. 1990	Studies the impact of legal employment upon illegal activity such as drug dealing. More than two-thirds of subjects maintain legitimate employment while engaging in drug trafficking.

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