

I Drug Issues. Author manuscript; available in PMC 2007 August 17.

Published in final edited form as:

Characteristics of Hidden Status Among Users of Crack, Powder Cocaine, and Heroin in Central Harlem

W. Rees Davis,

W. Rees Davis, Ph D., is a behavioral researcher at National Development and Research Institutes with interests in public health issues pertaining to hidden and stigmatized populations, including persons with HIV/STIs, drug users/sellers, sex workers, homeless persons, neglected/runaway youth and undocumented migrants

Bruce D. Johnson,

Bruce D. Johnson, Ph.D., directs the Institute for Special Populations Research at National Development and Research Institute and has published over 10 articles that delineate methodological approaches for gaining ethnographic access for research among hard-to-reach hard drug users and sellers.

Hilary James Liberty, and

Hilary James Liberty, Ph.D., is a licensed psychologist working as a principal investigator in the Center for Special Populations Research at National Development and Research Institutes. His forthcoming article on Fastpatches is the first field study to detect unique crack metabolites in sweat

Doris D. Randolph

Doris D. Randolph is a sociologist and an ethnographer with 17 years of research experience as a project director and interviewer investigating the prevention, treatment and contexts of drug using and selling populations on six research projects

Abstract

This article analyzes hidden status among crack, powder cocaine, and heroin users and setters, in contrast to more accessible users/sellers. Several sampling strategies acquired 657 users (N=559) and sellers (N=98). Indicators of hidden status were those who (1) paid rent in full in the last 30 days, (2) used nonstreet drug procurement. (3) had legal jobs, and (4) earned \$1,000 or more in legal income in the last 30 days. Nearly half had at least one indicator: approximately 16% of users/sellers had two to four indicators. In logistic regression analyses, those who had not panhandled in the last 30 days, those who had used powder cocaine in the last 30 days, and those never arrested were the most likely to have hidden status, whether the analysis predicted those having any indicators or those having two to four indicators. The four indicators begin to operationally define hidden status among users of cocaine and heroin.

Introduction

Hidden sellers of crack, powder cocaine, and heroin and hidden users of these drugs have rarely been available for behavioral research while pursuing these criminalized activities. All users and operatives involved in the distribution of crack, powder cocaine, and heroin face arrest and legal punishment and are often stigmatized by neighbors, such that many only have other drug users and operatives for friends or associates (Anderson, 1999;Furst, Johnson, & Goldsmith, 1998;Hamid, Deren, Beardsley, & Tortu, 1999;Johnson, Thomas & Golub. 1998). The term "operatives" refers not only to drug sellers and dealers, but also to those who play roles in assisting drug sales, such as lookouts, touts or pitchers, security, packagers, processors, gobetweens, persons holding money or drugs, and persons providing space or equipment for using drugs. As opposed to more accessible homeless and poor drug users and operatives, who may participate in research efforts in exchange for money, food or other compensation, hidden drug users and sellers have more to lose if their activities are exposed, such as higher incomes, legal

jobs, housing, and other assets of conventional society. Most survey research studies have been conducted in institutional settings that rarely provide access to active drug users and sellers and almost never access hidden drug users and sellers. Prevalence studies, household and school surveys, and other probabilistic techniques have often resulted in samples that have been viewed as unsuccessful in accurately assessing the characteristics of drug using and selling populations (Meiczkowski, 1996: Golub & Johnson, 2001; Heckathorn, 2002).

This article examines data from a research project that was designed to address numerous difficulties in obtaining a representative, noninstitutional sample of users and sellers of crack, powder cocaine, and heroin in Central Harlem of New York City. A variety of drug users and sellers were recruited for research participation, and rudimentary criteria were developed to determine those who were hidden among them. The fundamental hypothesis of this article was that drug users and sellers who had hidden characteristics would have characteristics and behaviors critically different from those without hidden characteristics.

Work by Elijah Anderson (1999) and others provided an interpretative framework for this article, as they have demonstrated that lifestyle codes were often the source of variations in behavior and outcomes among drug users and sellers. However, the research presented here contains no factors that directly relate to Anderson's lifestyle codes, and only a few of the factors that may be indicative of hidden status among drug users and sellers. Abiding by, or at least fronting, a "code of civility" (Anderson) as opposed to a "code of the street," was hypothesized as highly associated with hidden status, but this article does not test this hypothesis. However, the project's ethnographic investigations indicated that in the largely African-American low-income communities of Central Harlem, the code of civility and the code of the street were well represented within local neighborhoods and within families and households. The code of civility may also play a powerful role in communities other than African-American ones. For instance, in a study of largely middle-class Caucasian cocaine users in the San Francisco area, Waldorf, Reinarman, and Murphy (1991) found that a "stake in conventional life" (p. 10), comprised of jobs, family, and friends, was often the basis for limiting cocaine use or quitting altogether. Other investigators (Carpenter, Glassner. Johnson, & Loughlin, 1988; Hamid, 1992; Dunlap, Johnson, & Manwar. 1994; Dunlap & Johnson, 1996) documented that employed drug users often paid higher prices and consumed lower quality drugs to conceal their use (Hamid, 1992).

These largely ethnographic research studies suggested that living by a conventional code of civility is an important characteristic that influences hidden drug users and sellers to avoid compulsive use and evade potential danger and violence, whereas the code of the street is, at least in part, based on regular drug use and living with threats of aggression and violence.

Most of the middle and working class in African-American communities followed a code of civility, which includes respect for social authorities and the rule of law, steady employment in a legal job, maintenance of housing, support for family and other indicators of striving for success by conventional standards. The large majority of those who attempted to live by conventional standards avoided using crack, powder cocaine, and heroin, but a minority did use these drugs and usually limited their consumption in various ways (e.g., by social conditions, drug type, route, and frequency of consumption – Waldorf et al., 1991;Zinberg, 1984). Drug users with conventional lifestyles usually concealed their use from neighbors and other family members as well as from treatment programs and police.

Although Anderson (1999) and others note that social class is often highly correlated with whether any given drug user or seller will adhere to a code of civility (middle class or wealthier) or a code of the street (lower and under classes), class is not the determining factor in choice of code. Instead, those from any social class who had a code of civility often had a set of beliefs

in trust between people, social authorities and the rule of law. Those who lived by a code of the street had little or no faith and trust in social institutions, authority figures or in other people. For many years (e.g., Liebow, 1967; Anderson) there have been reports that those living by a code of the street expected cons and betrayals, even from their friends and family, and that personal security and safety was entirely one's own responsibility, rather than the responsibility of the police and other authorities. Also, the code of the street is characterized by excessive and compulsive consumption of drugs, illegal drug sales in public locales, petty and felonious crimes to raise money for drugs, rapid expenditure of money, scarce participation in legal jobs and severance of relationships with family and friends who oppose and reject street conduct (Johnson et al., 1985; Johnson, Golub, & Fagan, 1995).

The code of the street may flourish where community conditions and police surveillance are insufficient to disrupt and eliminate street drug sales. Recent analyses of drug markets among arrestees (Taylor. Brownstein, Gerstein, & Yang, 2002) document that the majority (approximately 80%) of drug purchases occur in street or public locations in Manhattan – a much higher proportion than among arrestees in other large American cities (National Institutes of Justice, 2000). Although police initiatives have dramatically reduced the public visibility of street drug sales and markets in New York City (Bratton & Knobler, 1998), most drug users can easily purchase drugs in public locales within walking distance of their residences (Taylor et al.).

In a community such as Central Harlem, the two codes coexist (Benoit, Randolph, Dunlap, & Johnson, 2003), but because those who live by the street code constitute an ever-present threat of violence, drug users living by the code of civility must have the ability to complete drug purchases and evade ordeal with those living by the code of the street. Thus, many residents of Central Harlem are capable of "code switching" (Anderson, 1999; Benoit et al.), adapting to challenges from street predators who view them as exploitable. The codes are not mutually exclusive, and anyone may live by both codes, almost simultaneously if necessary. Waldorf et al. (1991), Anderson (1999) and the other literature cited in this introduction were based on ethnographic investigations that made no attempt to operationalize or quantify the definitions of conventionality or the codes. However, this literature provides numerous examples of the codes that indicate considerable variations in how conventionality and the codes are exhibited by specific individuals or social networks.

The project developed an exploratory set of four criteria to differentiate which drug users and sellers may have adopted a conventional lifestyle and concealment of drug use and procurement. These criteria, limited to the available factors in the project data set, do not do justice to the rich variety of examples provided in the ethnographic literature and should be viewed as a first step towards developing quantitative characteristics of conventionality. Hidden users and sellers were those having discrete (nonstreet) drug procurement connections, having full time legal jobs, paying their rent in full in the last 30 days, and having more than \$1,000 of legal income in the last 30 days. None of these characteristics directly indicates whether these individuals behave with civility or adhere to conventional lifestyles, and the last three may be indicators of social class as much as of hidden status.

Sample Background

Samples drawn from hidden and illegal populations usually rely on nonprobabilistic designs that attempt to canvas the population typology, making sure to include members of all known subpopulations and locations where the population may be found within a defined geographic area (Heckathorn, 2002). "Targeted sampling" methods developed in studies concerning HIV and drug injection (Walters & Biernacki, 1989;Braunstein. 1993: Carlson, Wang, Siegal, Falk, & Guo, 1994;Booth, 1995) were designed to avoid the selection bias of convenience sampling from institutions or other easily contacted samples. Hidden and criminalized populations are

ideally contacted in settings natural and familiar to them, where no negative consequences may occur if they choose to participate in research. Although these methods and others (see Davis and Johnson, in review) maximize the probability of acquiring representative samples, a number of conditions must be satisfied to achieve sample representativeness. Members of the targeted population must be accessible; they must give reliable and valid screener information concerning criteria behaviors and their informed consent to be interviewed, Nonprobabilistic methods have been employed because standard probability sampling strategies have had substantial difficulties "locating" (accessing and screening) persons in the hidden population, rarely obtaining high rates of cooperation from potential respondents, and having problems documenting the reliability of answers provided by cooperative respondents about criteria behaviors (Fendrich, Johnson, Shaligram. & Wislar, 1999;Golub & Johnson, 2002;Golub, Johnson, Taylor, & Liberty, 2002). Each of these issues has been most problematic among the hidden subgroups, the confirmed nonrespondents who evade contact with researchers for a variety of reasons.

Drug users and operatives vary substantially in terms of their accessibility for research participation. Some members may be more available if incentives for participation are offered or if someone known to them approaches them for research participation (Heckathorn, 1997;Dunlap & Johnson, 1999;Williams, Dunlap. Johnson, & Hamid, 1992). For others the honorariums or payments for participation may have been insufficient; the consequences of being exposed by the research (no matter how minimized by design) may have been too great; and/or the research may have been perceived to benefit only the researchers or some other institution, government, or group and not the participants. In many places, including Central Harlem, it is a social norm among drug users and sellers as well as in the general community to mind one's own business rather than pry into others' lives, and those who do know about proscribed activities should not "snitch" or "rat out" those who participate in them. Persons who are relatively inaccessible to researchers (they avoid, cannot be contacted by, and/or would refuse an interviewer) fall into a large class of "nonrespondents" (persons who are clearly in the hidden population, but cannot be interviewed).

Regardless of the reasons for nonresponse, statistical measures may be implemented to weight selection probabilities, so the experiences of the hidden, rare, or illegal respondent may be given more analytical importance. However, when these weights are based on a few respondents, who may not he representative of hidden subgroups of respondents, their utility is severely limited. Alternatively, behavioral researchers steer sample acquisition to favor selection of a large number of hidden subgroups of respondents, as was accomplished in the project. Sometimes quotas are established for kinds of respondents who are less likely to gain entry to the sample or to represent subpopulations according to research criteria or other data (e.g., Carlson et al., 1994). Since lack of research access may be due to local conditions, behaviors, and avoidance patterns particular to subpopulations of the larger hidden populations of interest, the project employed a sampling plan based on tapping these variations and acquired a representative sample of users and operatives of crack, powder cocaine, and heroin.

Methods

Race, Gender, and Generational Factors

From 1998 to 1999, during the project's data collection period, over 95% of the users and sellers of crack, powder cocaine and heroin sampled in Central Harlem were African American or Latino (usually of Puerto Rican origin). These ethnic groups were disproportionately disenfranchised in terms of basic social measures, such as income, education, opportunities, discrimination, and many public health problems (McCord & Freeman, 1990). However, since they comprised such a large proportion of the sample, race was not a factor that could be analyzed. Since the project sampling plan (see below) oversampled among women, gender

comparisons regarding indicators of hidden status were performed. Since drug use and sales among Manhattan arrestees have been linked to generational cohorts (Golub & Johnson, 1999; Johnson, Golub. & Dunlap, 2000), analyses were also conducted comparing these generational cohorts for differences in hidden indicators. Other demographic factors, such as education and marital status, were investigated for associations with hidden status, but housing status was confounded with one of the criteria, paying the rent in full in the last 30 days.

Other Contrasts

Hidden drug users and sellers may report specific patterns of participation in various kinds of drug use and sales, in having contacts with criminal justice or drug treatment institutions and in sources of income, some of which may involve criminalized activities. Previous investigations indicated that crack was the drug of choice for poor, street-based drug users, and that marijuana (usually in the form of blunts – marijuana in a cigar shell) was frequently the only or primary drug used by young sellers of crack, powder cocaine, and heroin (Cross, Johnson, Davis, & Liberty, 2001;Davis & Johnson, 2000;Johnson et al., 2000). It was also more likely that hidden users and sellers had avoided arrest, quality of life violations, and violence and imprisonment, and that they had not sought drug treatment. Since legal jobs, fully paid housing, and high income were three of the four criteria for hidden status, income from illegal activities other than drug selling and from government programs assisting the poor and disabled were hypothesized to be inversely associated with hidden indicators.

Sample

The project designed and pilot tested an innovative combination of several sampling methods that used indicator data from the New York Police Department (NYPD) and the skills of five interviewers to obtain a representative sample of users and sellers of crack, powder cocaine, and heroin in Central Harlem. The NYPD provided the researchers with indicator data in the form of a computerized map of Central Harlem, pinpointing the street addresses of all drugrelated "allegations" and "complaints" (known as "kytes" within the NYPD) in Northern Manhattan over a two-year period, between April of 1996 through March of 1998. Douglass Williamson and Sonia Statlock from City University of New York's Center for Studies of the Environment linked NYPD drug allegation data to 1990 census data and calculated allegations/housing unit tables for each census block. Using this map, the first author divided Central Harlem into 45 primary sampling units (PSUs), 11 with a high number of drug allegations per capita, 13 with mid-level allegations per capita, and 21 with low allegations per capita. Each PSU included census blocks with a 1990 population averaging 2,500 persons.

Chain referral ("snowball" – Goodman, 1961) sampling was modified by targeted sampling (Waters & Biernacki, 1989) and aspects of respondent-driven sampling (Heckathorn, 1997. 2002) to recruit respondents in nine randomly selected PSUs. Snowball sampling is a strategy that usually involves recruitment from one or more social networks, as all respondents, including the initial ones are usually known to at least one other member of the sample. Snowball sampling has been productive for the study of hidden and/or illegal populations because the parameters that define these populations are central to the interdependence of these social networks (Spreen & Zwaagstra, 1994: Friedman, 2000; Friedman. Curtis. Neaigus. Jose, & Goldsmith, 1999). Also, snowball sampling is capable of recruiting persons who are homeless, migrants, undocumented, or who have other reasons why they are difficult to contact via traditional probabilistic methods (Heckathorn. 2002).

The Nomination Technique

The investigators implemented a "nomination grid" to obtain information (surrogate reports) about other drug users and operatives in order to oversample from hidden drug users and sellers. In each of the nine randomly selected PSUs, interviewers gathered information from 65 to 83

respondents who each nominated an average of 10 other persons. First, project ethnographers (led by coauthor Doris Randolph) spent two weeks to one month in the selected PSU identifying areas where crack, powder cocaine, and heroin use and sales activities occurred, as in targeted sampling (Walters & Bernacki, 1989; Carlson et al., 1994). These ethnographers were "privileged access interviewers" (Griffiths, Gossop, Powis, & Strang, 1993) who had existing contacts and life experiences with crack, powder cocaine, and heroin users and sellers in Central Harlem. These locations were recorded in an "ethnographic map" of the PSU that was remarkably similar to the computerized maps of allegations obtained from the NYPD and used to guide subsequent sampling efforts. After completing the ethnographic map of the PSU, the ethnographer and interviewers went to mapped locations in the PSU and recruited "initial seeds" for study participation.

Nomination techniques have been used infrequently in research on drug use and sales (Van de Goor et al., 1994) and may be considered as a variation of multiplicity sampling (Rothbart, Fine, & Sudman, 1982). The nomination techniques used in the project were refined in a pilot phase, to avoid ethical pitfalls that arise in the use of this procedure, to investigate various methods of steering the recruitment of respondents among the nominees in order to minimize bias, and to explore the conditions under which respondents would agree to nominate users and operatives of crack, powder cocaine, and heroin and provide detailed surrogate reports about them. Interviewers presented respondents with enlarged maps of their specific recruitment PSU and asked respondents only to nominate persons (first users, then operatives) living in this PSU. Then interviewers asked respondents if they knew anyone coming from outside the PSU to use, buy or sell crack, powder cocaine or heroin; persons the project labeled as "imports."

The interviewer asked for first and/or street names of all categories of nominees, users, operatives and imports, before asking the respondent approximately 30 questions about each nominee. Users were limited to those who only used crack, powder cocaine, or heroin and had no operative role; operatives could use these drugs as well as report their distribution of these drugs. The responses, or surrogate reports about each nominee, were recorded on a "nomination grid." First, a number of demographic questions were asked (e.g. age, gender, and race) and then questions concerning the relationships respondents had with nominees. Following this information, respondents were asked questions inquiring about the recency (defined below) of each nominee's involvement in kinds of drug use, purchase and sales, injection drug use, and recency and status as a drug distributor.

This anonymous method of asking respondents to nominate others probably also reduced respondents neglecting to nominate others for fear of reprisal or "masking" (withholding) of nominees. As previous research with snowball samples has indicated (Heckathorn, 2002) respondents are also likely to recruit their friends, or the easiest person to recruit among their nominees, if the selection is left to the respondent, especially as interviewers paid respondents to help recruit nominees for subsequent project participation. In the project, this bias was countered by leaving the selection solely to the interviewers, who were asked to recruit respondents with a number of steering criteria. First among these was to recruit any crack, powder cocaine, and/or heroin seller or import to the community. Second, interviewers selected the drug user with the least network density in order to counteract bias towards in-group members. Respondents were asked if each nominee knew the other nominees mentioned by the respondent; the number of other nominees known was considered as an indicator the interrelatedness of the respondent's network. The interviewer noted nominees who were not known to other nominees as being the least likely to be similar to the respondent or to the other nominees. Steering respondent recruitment to nominees on the periphery of his or her user group was designed to increase the probability of locating and interviewing the drug users and

operatives who had different social networks, who were more socially isolated, or who were hidden.

Only three respondents were allowed to recruit more than three of their nominees so that the sample would not become biased by large referral chains in proportion to smaller ones. These three respondents had many social connections, nominating a large number of people. The network density indicated that the social connections consisted of separate or nearly separate social networks. All chain referrals were ended after four waves of interviewing because previous research (Heckathorn, 1997,2002) had found that after four waves many factors reach "equilibrium" (reflecting true proportional equivalence to the population). This also avoided biasing the sample with numerous respondents from a single social network.

Recruitment Parameters and Techniques

Although respondents were limited to those aged 18 and over to respect human subjects' limitations, respondents could nominate a person of any age involved in crack, powder cocaine, or heroin use or sales. One respondent nominated several persons who were eight years old. Initial respondents were chosen over the entire PSU in order to reduce selection bias by selecting individuals with diverse social networks and locations, approximating a random sample within the PSU (Snijders, 1992). Interviewers knew the pool of persons eligible as initial seeds from prior canvassing of the area, which enabled them to construct ethnographic maps and collect other data involved in targeted sampling. From previous conversations with these persons, interviewers usually knew those most likely to agree to participate. Interviewers asked them to review informed consent materials and agree to participate in the study in exchange for \$20. The nomination technique and urine specimen collection were explained (see below) in the informed consent process. Although the project had exit data forms for person who were approached but refused to participate, only three of the initial seeds refused to participate before or during the informed consent process. Chain-referred respondents in subsequent sampling waves were subjected to project interviewers' screening criteria before being accepted for interviewing. Interviewers allowed respondent recruiters to tell potential respondents that urine specimen collection and nomination of others were part of project participation. Respondent recruiters were not allowed to tell potential respondents that they would be asked questions about each person nominated. Respondents who successfully recruited a new respondent received a \$20 recruiter's fee (a "secondary incentive" in RDS -Heckathorn, 1997).

Interviews were conducted in a variety of settings (parks, cars, the streets, restaurants, a room rented for two hours from someone known to interviewers, etc.) so that respondents and other people in Central Harlem would not be able to locate the project in a single place. Interviews were approximately one and a half hours long, excluding 15 to 30 minutes for the informed consent review and signature. Recruitment procedures, the informed consent process, screening procedures for potential respondents, the nomination process, and other aspects of sample acquisition were pilot tested in a randomly chosen PSU in Central Harlem for six months. Project staff learned what questions and procedures users and operatives of crack, powder cocaine, and heroin would and would not tolerate. All government identifiers, such as height, weight, eye color, home address, birthmarks/tattoos, etc., were deliberately avoided in interviewing respondents and in asking about their nominees. Interviewers recorded only the first and/or street names of respondents when the interview was administered. Informed consent signatures often consisted of just the first and/or street name. If either of respondents' or nominees' first or street names were too unique, then respondents would not reveal and/or interviewers would not record that first or street name. The interviewers also explained that the respondents should not provide their own or nominees' addresses, but would be asked to provide specific locations where they would be most likely found. By limiting name, address,

and other information all 657 respondents in the sample appeared not to fear any confidentiality or identity disclosure of themselves or their nominees. These protections against betraying themselves and others were sufficient not only to pass institutional review board evaluation, but also there were no reports of respondents or potential respondents feeling that their confidentiality was violated.

Informed Consent

The primary ethical issue was whether respondents put themselves or others at risk by nominating others. Since there was a long-standing street norm against outing, ratting, or snitching on other persons and not sticking one's nose into others' business, severe consequences may have been in store for respondents as well as nominees in using a nomination procedure.

In the informed consent process, respondents were also told that they would be asked to first provide urine specimens so that drug use could be confirmed by biological analyses before the interview began. The urine specimen was tested immediately with a Testcup[™] from Hoffman-LaRoche. This procedure also helped to ensure that their responses would be reliable and valid, as respondents knew at the outset that at least some of their responses would be checked. Only ten of all respondents did not provide urine specimens, and results from Testcup analyses indicated that only 11 self-reported users may not have been users of crack, powder cocaine, or heroin. However, cocaine and heroin metabolites in urine can only be detected within three days of use, and the 11 respondents may have used drugs four or more days prior to interviewing. No potential initial respondent ever refused to be interviewed after the informed consent process was completed, not only because the process ensured their confidentiality, but also because interviewers had established a relationship with respondents before asking consent for an interview. Also, all of the interviewers were from Central Harlem and had a prior history of drug use, such that potential respondents perceived interviewers as persons who could be trusted.

Description of Data

Information regarding use and sales of crack, powder cocaine, and heroin were elicited from respondents by asking about each kind of drug in terms of the recency of self-reported or surrogate-reported (for nominees) use or sale. Using a card with seven defined time periods: within (1) last 24 hours, (2) last three days, (3) last week, (4) last 30 days, (5) last year, (6) at some time but not in the last year, (7) never, and (8) "don't know," the respondents could tell interviewers the approximate time of last use or sale. The investigators defined current drug use or distribution as occurring within the last 30 days and defined lifetime drug use or distribution as occurring at some other time in the person's life but not in the last 30 days. Results concerning drug use and sales in this article use the current last 30 days criteria.

Characteristics of Predictive Factors

Almost all factors hypothesized as predictive of hidden status were assessed on the basis of recency. Current drug use, sales, and sources of income factors were limited to the past 30 days before interviewing. Respondents who used or sold all or some of the drugs and/or received income from some of the sources more than 30 days ago, but not in the past 30 days, were included with those who never used or never sold these drugs nor received income from these sources. This time frame was chosen because the validity of responses is more accurate when respondents are not attempting to recall behaviors from the past. Differences in lime frames between factors are those natural for each factor, rather than an imposed standardization. For instance, in the case of quality of life offenses, the type of offense (e.g., a gun check, an open container violation, etc.) was also requested, and memory beyond one year may be less than adequate. With most factors, we were interested in those "currently" (in the last 30 days in the

article) because many respondents have sampled various kinds of drugs, or had various kinds of sex partners, over time but use only one drug primarily at the time of interview.

With the exception of main and multiple sex partners, most demographic and behavioral characteristics were not limited to the last 30 days. Most of those who had been arrested, imprisoned or in drug treatment had done so more than 30 days before interviewing, and not in the last 30 days. Consequently, these factors were coded on an ever/lifetime participating or never participating basis. The questionnaire inquired if quality of life violations (Kelling & Coles, 1996), such as drinking from an open container, loitering and congregating, gambling, public urination, littering, etc. had occurred with respondents in the past year and whether respondents had been attackers or attacked in a physically violent incident in the past two years.

Analytic Approach

Since gender and status as a user or seller may be particularly relevant to hidden characteristics, chi-square analyses were conducted with these independent factors against each of the four criteria for hidden status, as well as for having combinations of criteria characteristics and selling drugs currently (in the past 30 days). Correlation analyses were performed to analyze the associations among the four criteria characteristics of hidden status and current drug selling, Chi-square analyses were performed to test for significant associations between having no indicators, one indicator, or two to four indicators of hidden status as the dependent factor and drug use and sales, sociodemographic, and behavioral predictors as the independent factors. Statistically significant independent factors in chi-square analyses were dummy coded for use in multivariate logistic regression analyses to determine the relative importance of factors. All independent factors were entered simultaneously using the direct method.

Results

Over half (56.0%; N=361) of the 645 respondents who provided data on all four criteria for hidden status had none of the criteria for hidden status. An additional 27.6% (N=178) only had one of the four criteria, usually that they had paid the rent in full in the last 30 days. Only 16.4%, or 106, of the sample had two to four of the criteria. Only 11 respondents (1.7%) had all four criteria for hidden status, and 27 (4.2%) had three of the four criteria. Because proportions of those having three or four criteria were small, subsequent analyses aggregated those having two to four hidden characteristics. Results in Table 1 show how the four hidden characteristics differed by gender and whether respondents were primarily users or sellers.

Women had proportionately fewer legal jobs than men (p<.001) and less legal income (p<.008) but were more likely to pay rent in full in the last 30 days (p<.001). Women were more likely to have at least one hidden characteristic than men (p<.001), but men and women were roughly equal at the level of having two to four hidden characteristics. The user/seller distinction was not associated with hidden characteristics except that sellers were more likely than users to have a discreet drug procurement connection (p<.001).

That the four indicators of hidden status are all statistically associated was demonstrated by the first set of correlation coefficients presented in Table 2 for all respondents. The weakest correlation involving the four indicators was between having a current full-time legal job and having a discreet, nonstreet, drug procurement connection (r=.081; p<.05), and the strongest was between having a current full-time legal job and having legal income of \$1,000 or more (r=.61; p<.001). The correlation coefficients are somewhat higher when only users are included (matrix II), but four of the seven correlations are no longer statistically significant when only sellers are analyzed (matrix III). Since hidden sellers appear not to be characterized by the four criteria, subsequent analyses examine only users of crack, powder cocaine, and heroin.

A specific pattern of drug use was evident among those with indicators of hidden status. Crack was used by 65.6% of those with two to four indicators of hidden status, but by proportionately higher numbers of those with one or no indicators (p<.000). Powder cocaine was clearly the drug of choice among hidden users, as 54.9% of those with two to four indicators and 42.5% with one indicator used powder cocaine, relative to 23.6% of those with no indicators of hidden status (p<.000). Heroin use, especially noninjection heroin use, was not associated with hidden status. Marijuana use was weakly associated with hidden status (p<.032), but alcohol was used by approximately four fifths of all groups.

Most of the hypotheses concerning institutional contacts, education, and marital status were confirmed by Table 3 data concerning these behaviors and characteristics. Hidden drug users and sellers were less likely to have been arrested (p<.000), less likely to have quality of life violations (p<.001), drug treatment experiences (p<.000), or violent incidents in the past two years either as attackers (p<.004) or as victims of a physical attack (p<.000). Note that with each of these factors there is a linear increase or decrease in proportions scanning from zero to one and two to four indicators. Hidden drug users with two to four indicators had a trend (p<.066) towards being more likely to have completed high school (does not include those who acquired a GED), and those with any indicators of hidden status were more likely to be married (p<.000) and having main partner sex (p<.000).

Hidden users were far less likely to receive income from criminal activities such as frauds and cons (p<.000), stealing (p<.000), and sex work (p<.000). Hidden drug users were also less likely to receive income from some sources associated with poverty such as panhandling (p<.000), welfare (p<.000), and family members (p<.000) or friends (p<.003), but some of these factors did not result in a linear increase or decrease as the number of hidden indicators increased (e.g. welfare). A statistically significant (p<.000) proportion of persons with one indicator of hidden status received food stamps (48.6%), as opposed to those with no indicators of hidden status (19.4%) or two to four indicators (21.1 %). Curiously, those with hidden indictors were more likely to receive income from AFDC/TANF than those with no indicators (p<.000). Income from SSI, sex partners, or associates in drug sales was not associated with hidden slams.

Logistic Regression Analyses

All factors predictive of hidden status were dummy coded such that the indicator value (e.g., being married, no current crack use, etc.) was set to one and all other values to zero. The dependent factor was coded in two dichotomous ways, with model 1 having any indicators coded as one and no indicators as the reference value of zero, and with model 2 having two to four indicators of hidden status coded one and zero representing those having zero to one indicators. In both models, all factors that were significant at the p<.05 level in Table 3 were included except for marijuana use and welfare, which were not significant in chi-square analyses contrasting any indicators with none. All 18 factors were entered simultaneously using the direct method.

In the first model, six factors were statistically associated with hidden status. In terms of odds ratios, not currently receiving income from panhandling (OR = 3.94; p<.001) was the best predictor of hidden status, and receiving income from AFDC/TANF (OR = 2.71; p<.012) was the second best. Using powder cocaine yielded roughly the same odds ratio as receiving income from AFDC/TANF, but the statistical significance of this factor was much higher and the confidence interval much narrower than for the first two factors (OR = 2.69; p<.000). Those who were either married, receiving food stamps, or had never been arrested were over twice as likely to have indicators of hidden status.

In model 2, only three of the six factors that yielded odds ratios more than twice as likely to have hidden factors in model 1 were predictive of having two to four hidden indicators. Not receiving income from panhandling yielded the highest odds ratio, but was barely statistically significant and had a very large confidence interval (OR = 8.47; p<.041). Never having been arrested was the second most predictive factor of two to four hidden indicators (OR = 2.48; p<.001), but yielded a higher significance level and a narrower confidence interval than the not currently panhandling factor. Finally, those using powder cocaine (OR = 2.04; p<.013) were twice as likely to have two to four hidden indicators as those not using this drug.

Discussion

A Four-Item Index of Hidden Status

The foregoing findings provide the foundation for an operational, quantitative understanding of drug users' lifestyles in Central Harlem. The majority (56%) of the 645 drug users and sellers in the sample had no indicators of hidden status, indicating that most adhered to an unconventional lifestyle (Waldorf et al., 1991) or a code of the streets (Anderson, 1999). In achieving this status, the majority reported purchasing drugs in street markets, not paying rent in full, not having legal employment, and not earning \$1,000 of legal income in the last 30 days. In this research project, only 16,4% (N=106) of 645 drug users and sellers from Central Harlem were found to have two or more of these four indicators. That over half of a sample of drug users and sellers did not have any of these indicators and that nearly one third only had one indicator, suggests that the index comprised of the four indicators is a rudimentary way of identifying those users and sellers of crack, powder cocaine, and heroin who have the commitment and the means for a conventional lifestyle independent of drug use and institutional contact factors.

The four indicators of hidden status were far more sensitive to hidden status among users than among sellers of crack, powder cocaine, and heroin, as only one of the four indicators was more significant for sellers rather than users (Table 1) and correlations among indicators were lower and many were not statistically significant among sellers (Table 2). The four-indicator index did not differentiate the hidden sellers of crack, powder cocaine, and heroin from among the sample of sellers, but the nonconventional code of the streets among the majority of users sampled is indicated by numerous factors documented in Table 3, especially those involving crimes, violence, and contacts with the criminal justice system.

Six Behavioral Predictors Of Hidden Status

The results in this article have demonstrated that the users with one or more hidden indicators were distinctly different from the other users sampled in Central Harlem on 18 of the 30 measures in Table 3. In chi-square analyses (Tables 1 and 3), hidden status has been associated with gender, distinct patterns of drug use, and a variety of behaviors, characteristics, and income sources. Using only those users classified as hidden as the indicator group (those having no indicators were the reference group), logistic regression analysis (Table 4) determined that among all of these factors, six yielded significantly increased odds of having hidden status. Primary among these factors were those who had not panhandled during the last 30 days, who were nearly four times more likely to have hidden status in the first model (OR = 3.94; model 1, Table 4). Panhandlers are among the most accessible and unconventional potential research subjects. Panhandlers often live on the streets and likely encounter the code of the streets (Anderson, 1999) more often than other users of crack, powder cocaine, and heroin.

That those who received AFDC/TANF were also nearly three times more likely (OR = 2.71), and those receiving food stamps were over twice as likely (OR = 2.35), to have at least one hidden characteristic confirms the notion that social class and conventional lifestyles are not

always correlated. These benefits are only available to the poor, but provide income (or vouchers) to support a residence. Paying rent in full in the last 30 days was the primary measure that classified many users as having one hidden characteristic. In model 2 of Table 4, where only those having two to four hidden characteristics were the indicator group, receiving AFDC/TANF and food stamps were not good predictors of hidden status. Further analyses indicated that these users were mostly women (Table 1), many of whom were receiving one or more forms of government assistance (AFDC/TANF, food stamps, welfare, SSI—data not shown). These benefits might be lost if authorities discover that the beneficiaries use drugs or have been arrested, which may be the primary motivation for these users to maintain a hidden stains.

Project ethnographers frequently reported that powder cocaine users disparaged the use of crack, implying that using powder cocaine was more conventional and less associated with the code of the streets than the use of crack or heroin. These reports were substantiated by quantitative analyses (Table 4), as powder cocaine users were nearly three times more likely (OR = 2.69) to have at least one hidden characteristic than those not currently using powder cocaine. This result was not as strong when only those having two to four hidden characteristics were analyzed as the indicator group in model 2 of Table 4, as powder cocaine users were only twice as likely to have hidden status (OR = 2.04). Of the three drugs (crack, powder cocaine, and heroin) that were used by respondents as part of the inclusion criteria, powder cocaine use was the most prevalent among hidden users.

Being married closely followed use of powder cocaine in predicting hidden status in model 1 (OR = 2.45; Table 4). This finding indicates commitment to a variety of roles associated with household management and parenting, highly associated with conventional lifestyles (Anderson, 1999). Other studies of drug users with conventional lifestyles have found that sometimes their drug use is moderated by a strong desire to preserve a healthy marriage (Waldorf et al., 1991).

Avoiding contacts with the law in terms of not having been arrested (OR = 2.25. model 1) was also highly predictive of hidden status. Avoiding arrest was more predictive of users having two to four indicators of hidden status (OR = 2.48, model 2) than of those having any indicators. These findings probably indicate lack of participation in other crimes by hidden drug users and an avoidance of street culture and "hanging out" in areas where police may stop and question drug users (Kelling & Coles. 1990;Maple, 1999).

Public Perception and Policy

Lack of contact and research with hidden users and sellers distorts public perception and policy regarding crack, powder cocaine and heroin use. Use of these drugs is routinely equaled with socially degraded status and participation in activities indicative of the code of the streets. Research reports based on users and sellers recruited from institutions, such as drug treatment centers and arrestees, miss those who are hidden. If the project sample is representative of users and sellers of crack, powder cocaine, and heroin in Central Harlem, as the authors have attempted to demonstrate in previous articles (Davis & Johnson, 2000; Cross et al., 2001; Davis, Johnson, Randolph, & Liberty, 2003; Davis & Johnson, in review), then most surveys of treatment or arrestee populations may miss as many as 44% of users and sellers of crack, powder cocaine and heroin.

The functional users with legal jobs, good incomes, and housing are not perceived as a social problem, and their drug use often goes undetected (because drug use is carefully concealed) and is largely ignored by social policy (Waldorf et al., 1991). Those researched in street drug markets and subcultures, many of whom have been in drug treatment facilities or have been arrested, largely shape public perception of drug users and sellers. Also, public perception

associates drug users and sellers with other kinds of crime, but the hidden users in this research did not usually have other illegal sources of income.

Study Limitations and Future Research

The findings of this study must be viewed as a tentative first step towards operationalizing some of the factors involved in hidden status and exploring associations between hidden status and other, difficult to define concepts such as conventionality and civility. Using only four items to indicate hidden status is unlikely to be an exhaustive list of the possible indicators. Indeed, some of the predictors of hidden status found in this study, such as marriage, some income sources and lack of contact with criminal justice and treatment institutions, may be used to further define hidden status among drug users in future studies. The four-item index was not very successful in differentiating hidden drug sellers among the sample of drug sellers. Further research is necessary to determine whether nearly all drug sellers have hidden status or whether a set of factors may distinguish the hidden sellers from others. We have provided no evidence that hidden status and the code of civility/conventional lifestyles are highly associated, relying on the research of others who have made this association in ethnographic studies.

The project recruited hidden drug users and sellers using methods that have been developed and refined only in the last several decades. Since few studies have been able to acquire comparable samples, this has been an exploratory study. Further research is required to replicate statistically significant findings of drug use, to determine demographic and behavioral factors associated with hidden status, and to understand the lifestyles and consequences of drug use and sales among those with hidden status. The results reported in this article may extend to other African-American urban neighborhoods outside of Central Harlem because a long history of drug use and sales is hardly unique to Central Harlem; however, there is no evidence to confirm this possibility. The proportion of hidden drug users may be much higher in suburban and rural neighborhoods, where nearly everyone at least appears to abide by the code of civility central to a conventional lifestyle. The findings of this study suggest that where poverty and crime rates are low, community social norms and police policies and activities combine to consistently suppress street drug markets and those following the code of the streets.

Acknowledgements

This research was supported by funding from the National Institute on Drug Abuse grant, "Estimating Current Hard Drug Users and Operatives; Lifestyles and Consequences" (NIDA—5R01 DA09339-04, and 5 T32 DA07233-19) and by National Development and Research Institutes. The authors acknowledge the many contributions to this research by Barry Randolph. Georgann Wright, Denecia Pearce, Phyllis Curry, James Pride, Howard Lune, Charles Small, and Fatos Kaba.

References

Anderson, E. Code of the street: Decency, violence, and the moral life of the inner city. New York: W.W. Morton & Co; 1999.

Benoit E, Randolph D, Dunlap E, Johnson BD. Code switching and inverse imitation among marijuanasmoking crack sellers. British Journal of Criminology. 2003in press

Booth, RE. Proceedings of the Community Epidemiology Work Group, National Institute on Drug Abuse. II. 1995. The use of indicator and observational data for estimating hidden populations: Drug users in Denver, 1991–94; p. 46-58.

Bratton, WJ.; Knobler, P. Turnaround: How America's top cop reversed the crime epidemic. New York: Random House; 1998 .

Braunstein M. Sampling a hidden population: Noninstitutionalized drug users. AIDS Education and Prevention 1993;5(2):131–139. [PubMed: 8323855]

Carlson RG, Wang J, Siegal HA, Falck RS, Guo J. An ethnographic approach to targeted sampling: Problems and solutions in AIDS prevention research among injection drug and crack-cocaine users. Hitman Organization 1994;53(3):279–286.

- Carpenter, C.; Glassner, B.; Johnson, BD.; Loughlin, L. Kids, drugs, and crime. Lexington, MA: Lexington Books; 1988.
- Cross J, Johnson BD, Davis WR, Liberty H. Supporting the habit: Income generation activities of frequent crack users compared with frequent users of other hard drugs. Drug and Alcohol Dependence 2001;64 (2):191–201. [PubMed: 11543989]
- Davis WR, Johnson BD. Towards an ethnographic epidemiology: Methods for recruiting the most hidden members of hidden populations for research participation. In review
- Davis WR, Johnson BD. Criminal justice contacts of users and sellers of hard drugs in Harlem. Albany Law Review 2000;63(3):877–922.
- Davis WR, Johnson BD, Randolph D, Liberty H. An enumeration method of determining the prevalence of users and operatives of cocaine and heroin in Central Harlem. Drug and Alcohol Dependence 2003;72:45–58. [PubMed: 14563542]
- Dunlap E, Johnson BD. Family/resources in the development of a female crack seller career: Case study of a hidden population. Journal of Drug Issues 1996;26(1):177–200.
- Dunlap E, Johnson BD. Gaining access to hidden populations: Strategies for gaining cooperation of sellers/dealers in ethnographic research. Drugs and Society 1999;14(12):127–149.
- Dunlap E, Johnson BD, Manwar A. A successful female crack dealer: Case study of a deviant career. Deviant Behaviour 1994;15:1–25.
- Fendrich MT, Johnson C, Shaligram M, Wislar JS. The impact of interviewer characteristics on drug use reporting by male juvenile arrestees. Journal of Drug Issues 1999;29(1):37–58.
- Friedman, SR. NIDA Monograph on Social Networks, Drug Abuse, and HIV Transmission. Bethesda: MD; 2000 . Summary: Promising social network research results and suggestions for a research agenda.
- Friedman, SR.; Curtis, R.; Neaigus, A.; Jose, B.; Des Jarlais, DC. Social networks, drug injector's lives, and HIV/AIDS. New York: Kluwer Academic/Plenum Publishers; 1999.
- Furst T, Curtis R, Johnson BD, Goldsmith D. The Rise of the Street Middleman/Woman in a Declining Drug Market. Addiction Research 1998;5(4):1–26.
- Golub A, Johnson BD. Cohort changes in illegal drug use among arrestees in Manhattan: From the heroin injection generation to the blunts generation. Substance Use and Misuse 1999;34(11):1733–1738. [PubMed: 10540971]
- Golub A, Johnson BD. Variation in youthful risk of progression from alcohol/tobacco to marijuana and hard drugs across generations. American Journal of Public Health 2001;91(2):225–232. [PubMed: 11211630]
- Golub, A.; Johnson, BD. Substance use progression and hard drug abuse in inner-city New York. In: Kandel, DB., editor. Stages and pathways of involvement in drag use: Examining the gateway hypothesis. New York: Cambridge University Press; 2002. p. 90-112.
- Golub A, Johnson BD, Taylor A, Liberty HJ. The validity of arrestee self-reports: Variations across questions and persons. Justice Quarterly 2002;19(3):477–502.
- Goodman LA. Snowball sampling. Annals of Mathematical Statistics 1961;32:117–151.
- Griffiths P, Gossop M, Powis B, Strang J. Reaching hidden populations of drug users by privileged access interviewers: methodological and practical issues. Addiction 1993;88(1):617–626.
- Hamid, A. Drugs and patterns of opportunity in the inner city: The case of middle aged, middle income cocaine smokers. In: Harrell, A.; Peterson, G., editors. Drugs, crime, and social isolation: Barriers to urban opportunity. Washington, D.C.: Urban Institute Press; 1992. p. 209-239.
- Hamid R, Deren S, Beardsley M, Tortu S. Agreement between urinalysis and self-reported drug use. Substance Use and Misuse 1999;34(11):1585–1592. [PubMed: 10468109]
- Heckathorn DD. Respondent-driven sampling: A new approach to the study of hidden populations. Social Problems 1997;44(2):174–199.
- Heckathorn DD. Respondent-driven sampling II: Deriving valid population estimates from chain-referral samples of hidden populations. Social Problems 2002;49(1):11–34.

Johnson, BD.; Goldstein, PJ.; Preble, E.; Schmeidler, J.; Lipton, DS.; Spunt, B.; Miller, T. Taking care of business: The economics of crime by heroin abusers. Lexington, MA: Lexington Books; 1985.

- Johnson, BD.; Golub, A.; Dunlap, E. The rise and decline of drugs, drug markets, and violence in New York City. In: Blumstein, Alfred; Wallman, Joel, editors. The crime drop in America. New York: Cambridge University Press; 2000. p. 164-206.
- Johnson BD, Golub A, Fagan J. Careers in crack, drug use, drug distribution, and nondrug criminality. Crime and Delinquency 1995;41(3):275–295.
- Johnson, BD.; Thomas, G.; Golub, AL. Heroin use among Manhattan arrestees from the heroin and crack eras. In: Inciardi, James A.; Harrison, Lana D., editors. Heroin in the age of crack cocaine. Beverly Hills: Sage; 1998. p. 109-130.
- Kelling, GL.; Coles, CM. Fixing broken windows: Restoring order and reducing crime in our communities. New York: Free Press; 1996.
- Liebow, E. Tally's corner: A study of Negro streetcorner men. Boston: Little, Brown & Co; 1967.
- Maple, J. The crime fighter. New York: Doubleday; 1999.
- McCord MD, Freeman HP. Excess mortality in Harlem. New England Journal of Medicine 1990;322(3): 173–177. [PubMed: 2294438]
- Mieczkowski, TM. Crime and Justice Annual Review. University of Chicago; 1996. The prevalence of drug use in the United Stales; p. 348-414.
- National Institute of Justice. 1999 annual report on drug use among adult and juvenile arrestees. NCJ 2000:181426.
- Rothbart GS, Fine M, Sudman S. On finding and interviewing the needles in the haystack: The use of multiplicity sampling. Public Opinion Quarterly 1982;46:408–421.
- Snijders TAB. Estimation on the basis of snowball samples: How to weight? Bulletin de Methodologie Sociologique 1992;36:59–70.
- Spreen M, Zwaagstra R. Personal network sampling, outdegree analysis and multilevel analysis: Introducing the network concept in studies of hidden populations. International Sociology 1994;9 (4):475–491.
- Taylor, BG.; Brownstein, HH.; Gerstein, DR.; Yang, M. A cluster analysis of urban drug markets as characterized by arrestees. Presented at American Society of Criminology; Chicago, IL. November; 2002.
- Van de Goor LAM, Garretsen HFL, Kaplan C, Korf D, Spruit IP, de Zwart WM. Research methods for illegal drug use in hidden populations: summary report of a European invited expert meeting. Journal of Psychoactive Drugs 1994;26(1):33–40. [PubMed: 7913127]
- Waldorf, D.; Reinarman, C.; Murphy, S. Cocaine changes: The experience of using and quitting. Philadelphia: Temple University Press; 1991.
- Walters JK, Biernacki P. Targeted sampling: Options for the study of hidden populations. Social Problems 1989;36(4):416–430.
- Williams T, Dunlap E, Johnson BD, Hamid A. Personal safety in dangerous places. Journal of Contemporary Ethnography 1992;21(3):343–374.
- Zinberg, N. Drugs, set and setting: The basis for controlled intoxicant use. New Haven: Yale University Press; 1984.

Table 1

Hidden Characteristics by Gender and Users/Sellers (N=657)

	(;	
Hidden characteristic % (N) of total	Ge Male 56.5 (371)	Gender Female 43.5(286)	p Value	Frimary L Users 85.1(559)	Primary Designation (559) Sellers 14.9 (98)	P Value
Legal income (N = 656)			0.008			0.505
\$0 to \$999	84.9	91.6		87.5	8.68	
\$1,000 or more	15.1	8.4		12.5	10.2	
Drug buy location (N=646)			0.613			0.001
Street connection	87.4	86.1		88.8	75.5	
House, phone, oth.	12.6	13.9		11.2	24.5	
Legal job			0.001			0.039
No full time work	82.2	92.7		85.7	92.9	
Legal work FT	17.8	7.3		14.3	7.1	
Housing			0.001			0.855
Partial/no payment	9.77	60.1		70.3	69.4	
Pay rent in full	22.1	39.9		29.7	30.6	
All 4 characteristics (N=645)			0.001			0.317
No characteristics	59.7	51.1		57.0	50.0	
1 characteristic	21.6	35.4		26.5	34.0	
2-4 characteristics	18.6	13.6		16.5	16.0	

Table 2

Correlations Among Indicators of Hiddenness

I: All respondents (N = 657) Hidden characteristic	Legal income >= \$1,000	Discrete drug buy	Current legal work
Discrete drug buy	.106 (645)**		
Current legal work	.610 (656) ***	.081 (646)****	
Pay rent or mortgage	.225 (656)***	.179 (646) ***	.138 (657)***
II: Respondents designated as us	ers only (N = 559)	, , ,	(,
Discrete drug buy	.143 (551)***		
Current legal work	.617 (558)***	.105 (552)* .208 (552)***	
Pay rent or mortgage	.227 (558)***	.208 (552)***	.148 (559)***
III: Respondents designated as p		,	
Discrete drug buy	.036 (98)		
Current legal work	.561 (98)	.027 (94)	
Pay rent or mortgage	.215 (98)*	.076 (94)	.074 (98)

*** p<.001; ** p<.01;

*p<.05

NIH-PA Author Manuscript **Table 3**Drugs Used, Behavioral Characteristics, and Sources of Income by Indicators of Hiddenness (N=551, unless indicated) NIH-PA Author Manuscript NIH-PA Author Manuscript

I: Drugs used in last 30 days		Percent within indicators		% of sample	P Value
% (N) of total sample	0 57.0(314)	1 26.5(146)	2, 3 or 4 16.5(91)	100(551)	
Crack (N≡ 550)	85.7	80.1	65.6	6'08	0.000
Powder cocaine	23.6	42.5	54.9	33.8	0.000
Heroin	24.8	30.1	23.1	26.0	0.388
Non-IV heroin	17.5	19.2	16.5	17.8	0.855
Injection	8.3	11.6	6.6	6.8	0.359
Marijuana *	56.4	60.3	71.4	59.9	0.032
Alcohol	79.3	82.9	82.4	80.8	0.600
II: Behavior or characteristic					
Never arrested	17.5	37.0	54.9	28.9	0.000
Never in prison (550)	80.2	84.2	90.1	82.9	0.062
No quality of life (548)	57.1	73.3	80.0	65.1	0.001
Attacked in last 2 yrs. (550)	45.7	32.9	18.7	37.8	0.000
Attacker in last 2 yrs. (550)	28.1	17.8	14.3	23.1	0.004
Never in drug tx (548)	24.4	34.2	46.2	30.7	0.000
High school grad. (547)	39.4	39.7	52.7	41.7	0.066
Married (547)	4.2	13.7	15.4	8.6	0.000
Main partner sex	57.0	73.3	73.6	64.1	0.000
Multiple sex partners (548)	54.3	36.3	47.3	48.4	0.001
III: Income sources in last 30 days					
Frauds and cons (550)	19.8	6.8	1.1	13.3	0.000
Sex work	25.2	9.6	3.3	17.4	0.000
Stealing	27.1	13.0	4.4	19.6	0.000
Panhandling	23.2	4.8	1.1	14.7	0.000
Welfare *	12.4	13.0	1.1	10.7	0,000
Family members	43.9	26.7	25.3	36.3	0.000
Friends (550)	18.2	11.6	5.5	14.4	0.003
Food stamps (550)	19.4	48.6	21.1	27.5	0.000
AFDC/TANF (550)	3.8	26.0	11.0	10.9	0.000
ISS	9.6	17.1	6.6	11.6	0.064
Sex partners	45.5	37.0	39.6	42.3	0.189
Assist in drug sales	6.7	4.1	2.2	5.3	0.151
Drug dealers (550)	5.8	2.7	1.1	4.2	0.060

not statistically significant when no indicators are crosstabulated with any indicators

NIH-PA Author Manuscript
 Table 4

 Two Logistic Regression Models for Predictors of (1) Any Indicators and (2) Two to Four Indicators of Hiddenness (N=533)
NIH-PA Author Manuscript NIH-PA Author Manuscript

Current (last 30 days) Behavior (unless indicated)	Odds ratio	Model 1 Any indicators vs. 0 95% CI	p Value	Odds ratio	Model 2 2-4 indicators vs. 1-0 95% CI	P Value
Married	2.43	1.11–5.33	0.027	1.53	.71–3.32	0.278
Main partner sex	1.01	.63–1.64	0.956	1.37	.74–2.53	0.318
No multiple partner sex	1.11	.71-1.74	0.654	1.54	.90–2.65	0.117
No crack use	1.24	.71–2.17	0.457	1.52	.81–2.88	0.196
Powder cocaine use	2.69	1.67-4.31	0.000	2.04	1.16–3.57	0.013
Never arrested	2.25	1.41–3.59	0.001	2.48	1.44-4.27	0.001
No quality of life offence	1.25	.79–1.97	0.338	1.27	.68–2.36	0.454
Not attacked last 2 yrs.	1.07	.63–1.84	0,804	1.71	.79–3.68	0.171
Not an attacker last 2 yrs.	1.05	.57–1.94	0.877	1.37	.57–3.29	0.478
Never in drug treatment	1.50	.94–2.38	0.086	1.20	.69–2.10	0.516
AFDC/TANF income	2.71	1.25–5.88	0.012	0.70	.30–1.65	0.419
Food stamps	2.35	1.44–3.82	0.001	0.63	.33–1.23	0.175
No income from family	1.23	.76–1.97	0.401	1.07	.58–1.98	0.833
No income from friends	1.25	.61-2.56	0.552	0.92	.30–2.87	0.886
No panhandling income	3.94	1.70–9.16	0.001	8.47	1.09–65.8	0.041
No fraud/con income	2.41	.94–6.21	0.068	5.20	.55–49.0	0.150
No stealing income	1.14	.55–2.38	0.719	2.06	.60-7.07	0.252
No sex work income	1.64	.80–3.37	0.176	3.04	.80-11.5	0.102