Published in final edited form as:

Subst Use Misuse. 2003 ; 38(11-13): 1789–1806.

Patterns of Drug Distribution: Implications and Issues[#]

Bruce D. Johnson, Ph.D.*

Institute for Special Population Research, National Development and Research Institutes, New York, New York, USA

Abstract

This article delineates various patterns of illicit sales of drugs, especially at the retail (and near-retail) level, addressing a variety of central issues about drug sales and distribution documented during the past 30 years, including: a) the links between drug consumption and drug distribution activities; b) the various distribution roles; c) various levels of the distribution hierarchy; d) types of retail and wholesale markets; e) the association of drug distribution with nondrug associated criminality and violence. The article also will address the implications of drug distribution: whether various public policies such as supply reduction and source interdiction affect illicit drug markets, and how policing strategies and various law enforcement strategies can influence the involvement of individual participation in drug distribution activities. The overlooked contribution of treatment for “drug abuse” to reducing drug sales and distribution activities also will be considered as will other critical unresolved issues.

Keywords

Drug sales and distribution; Illicit drug markets; Supply/demand; Drug treatment; Criminality; Heroin; Crack; Cocaine

INTRODUCTION

This article is designed to summarize many complex findings related to patterns of illegal drug distribution and sale. The focus is upon the retail (and near-retail) level of heroin, cocaine, and crack. It does not address the equally complex issues of marijuana/cannabis distribution, which is also illegal in most societies. The first section will address:

- The role structure of illegal distribution networks,
- Distribution hierarchy,
- Types of retail and wholesale markets,
- Linkages of drug distribution with violence, and
- Links of distribution to property crimes/sex work.

The article also will address several important implications and issues associated with illegal drug distribution, including:

- Do supply interdiction strategies work well?
- Do “tough laws” stop illicit distribution?

[#]A version of this article was presented at the MEMSIDU conference in Pavia, Italy, May 16, 2002.

*Correspondence: Bruce D. Johnson, Ph.D., Director, Institute for Special Populations Research, National Development and Research Institutes, 71 West 23rd St., 8th Floor, New York, NY 10010, USA; Fax: (917) 438-0894; E-mail: johnsonb@ndri.org.

- Do “tough laws” reduce illegal drug use?
- Can effective policing reduce public illicit distribution and consumption?
- What enforcement activities work best?
- How does treatment affect distribution?
- How about harm reduction approaches?
- What distribution controls have worked?

Background for Understanding Retail and Near-retail Levels of Illegal Drug Distribution

The history of illegal drug distribution began with the rise of commercial opium trading in Far East and the widespread nature of the patent medicine business in the 19th century (Musto, 1999; Courtwright, 2001). In many respects, “the drug abuse problem” was initiated with three major 19th century inventions. While these inventions were tremendously important advances for the development of modern medicine and remain exceptionally valuable when appropriately used by medical personnel, these inventions also increased the potency of drugs consumed, making them easier to use and abuse, as well as easier to conceal and smuggle.

- The invention of the hypodermic needle/syringe in the 1850s enabled persons to deliver specific doses of drugs directly into the blood stream.
- The isolation of morphine from opiates in 1803 and the refinement from morphine and commercial sale of heroin in 1898 greatly increased the potential for addiction and abuse among users.
- Likewise, the isolation of cocaine hydrochloride from the coca plant in the 1860s introduced yet another major substance that has become widely abused.

During the first quarter of the 20th century, concern about commercial opium trading in the Far East, especially China, and the extensive use of opiates and cocaine in patent medicines, resulted in international agreements in the 1920s to limit the sale of these substances to medical purposes. These international agreements were made part of the peace treaty following World War I, obliging most of the western nations to establish laws restricting opiates and cocaine to medical practices (Musto, 1999, 2002). When these policies were implemented following World War I, the issue of whether a person addicted to these substances could be provided with maintenance doses by doctors was not resolved. In the United States, the alcohol prohibition agency was directed to enforce this law; this subsequently evolved into the Bureau of Narcotics after alcohol prohibition ended. This bureau determined that physicians could not prescribe heroin and cocaine to those dependent upon these drugs and arrested and prosecuted a few doctors for doing so. Most doctors ceased prescribing heroin, morphine, and cocaine to addicted persons (Musto, 1999).

Even when these drugs could be sold legally, however, a small number of persons began to resell heroin supplies to others who wished to avoid the stigma of appearing addicted (Courtwright, 2001). After doctors ceased prescribing to addicts, many current heroin and morphine users began to purchase these drugs from illegal sellers. Following a moral crusade, the commercial sale of heroin was completely prohibited 1928 in the United States, and similar policies were subsequently implemented in many other countries (Musto, 1999). The prohibition against heroin resulted from campaigns that labeled persons as “dope dealers.” “Tough laws” imposed criminal penalties and prison sentences upon those who were convicted of these crimes.

During the 1950s to the 1980s, U.S. legislators and politicians constantly promoted policies that were “tough on criminals” and mandated lengthy prison sentences (up to lifetime) for

sellers of heroin and cocaine, and for sellers of crack (freebase cocaine). These policies primarily emphasized the “moral righteousness” of a drug-free lifestyle and were largely symbolic of American distress about illegal drug use. The illicit drug seller, especially those conducting business in public locations, continues to provoke the distain and fear of ordinary citizens who oppose illegal drug use.

THE GENERAL OUTLINE OF ILLEGAL DISTRIBUTION OF “HARD DRUGS”

Within this framework of illegality, the raw materials (opiates for heroin, coca leaf for cocaine) usually are cultivated in remote rural areas by very poor farmers in the world’s poorest countries (Morales, 1989). These growers receive much more income than they would otherwise earn from other legal crops. Yet, the costs of cultivation are a small fraction of the retail cost paid by the consumer. Growers sell to a extensive and elaborate network of persons who engage in illegal smuggling, refining raw materials into heroin or cocaine. Specialized syndicates effectively smuggle refined drugs illegally into wealthy societies, such as the United States and Europe (Stares, 1996). In the 1990s, illegal smuggling and dealing has arisen in third world countries (Musto, 2002). The United States and Europe spend billions every year for “source interdiction” and “supply disruption” policies (MacCoun and Reuter, 2001). Likewise, billions more are spent for local enforcement of tough laws for police, courts, and correctional services. Only modest amounts are expended for drug user treatment (“demand reduction”) in localities (Musto, 2002; Massing, 1998).

Role Structure of Illegal Distribution Networks

The structure of illegal drug sales and distribution generally is simple in its general outlines, yet fiendishly complicated in the details when applied to any specific distribution group. The role structure may be grouped into retail level distributors and wholesale distributors. Research (Johnson et al., 1990; Johnson et al., 2000) has delineated two levels of retail distributors:

Low-level distributors engage in a loose assortment of roles in which an “actor” is responsible for either, but never for both, drugs or money. They act as “holders,” “transporters,” “mules,” “deliverers,” “counters,” “lookouts,” “backups,” or “muscle.”

Retail sellers are responsible for both money and drugs (at least temporarily). This role is the functional, if illegal, equivalent of retail clerks in stores. They collect money from someone (usually the final retail consumer) purchasing a commodity.

Wholesale distributors. Dealers routinely purchase large “wholesale” level units of crack, cocaine, or heroin (e.g., ounces, grams, pounds, kilograms), by weight or, especially, by dollar amounts.

Upper-level distributors often import cocaine/heroin from producer countries, purchase, and/or sell multiple kilograms of cocaine. They oversee the financing, smuggling, and transport of these drugs, rarely “handling,” “possessing,” or “transacting in” the drugs they own. These upper level distributors develop and maintain transnational networks of persons who conduct importation and distribution of wholesale quantities, and are labeled as organized criminal groups. (MacCoun and Reuter, 2001).

Key Findings of Empirical Research About Illicit Drug Distribution

Proportionately very few nonusers of illegal drugs ever engage in illegal sales or transfers of drugs (see Johnson et al., 2000).

Almost all distributors also consume illegal drugs (a few sometimes sell drugs they do not consume regularly). Most distributors primarily provide their labor and skills in exchange for

the drugs they consume. Often they receive no cash payments but consume a portion of the drug(s) they are to sell. Low-level distributors routinely switch among the various roles, often within minutes.

Upward mobility from retail seller into dealer and importer roles is very difficult and unlikely. Indeed, the vast majority of illegal drug users often performs the lowest level, and the legally most dangerous, roles in distribution. Almost no low-level distributors and few sellers pay for their own apartment/home or support a family. In the United States, many lower-level distributors live at severe poverty levels. This is true even when their sales income appears to be substantial. (Johnson et al., 1985,2000).

Distribution hierarchy. Most police, court, and policy interest is focused upon upper level (dealers, suppliers, traffickers). Yet the vast majority (over 80%) of arrestees and court cases are minor sellers and low-level distributors, although they may have extensive and more serious criminal histories (Golub et al., 2002). Effective traffickers, suppliers, and sellers insulate their identities and illegal activities from virtually everyone, except their most trusted coworkers. Suppliers and sellers use impoverished persons to perform dangerous missions and roles, and typically pay them only after successful performance.

Types of Retail/Wholesale Markets

Private networks involve illegal transactions among buyers and sellers who routinely cooperate in arranging transactions that occur inside private settings, such as homes, apartments, or cars. Many transactions are often arranged by phone. Such private networks are rarely known to or penetrated by police/law enforcement. These networks are especially common among middle class and working consumers of illegal drugs.

Public networks involve sellers and lower-level distributors making sales to buyers in public settings (streets, parks), and even in private spaces (bars, clubs, stores, hallways and common areas of buildings). Buyers/sellers rarely know each other personally. Sellers can maximize the number of transactions and customers served.

Freelance public distribution: Virtually all illicit drug distributors prefer freelance work (where they sell alone and were responsible for both money and drugs). Yet lone freelancers did not predominate in New York. Their more organized competitors drove most freelance crack sellers out of the more lucrative public selling locations; police arrested and removed others. The primary problem for freelancers was dependence; they consumed the supplies before they were sold. A common pattern involved. Freelance cooperatives where several freelance sellers collaborated in a loose cooperative fashion in a particular location, relying on informal agreements to help each other, but no one controlled the supplies or money of the others.

Distribution businesses occurred when one or more persons was able to control the activities of several other persons. Such business-like sellers constitute a minority of distributors. But they hire and pay regular salaries to a few key employees who are responsible for hiring and managing day laborers who do the most dangerous work.

Day laborers were unable to purchase supplies of drugs to sell, but sought work from other sellers. Usually hired for a day, they may hand out drugs ("pitch") after someone else obtains the money or serve as a lookout. Effectively, the day laborer is paid to do as directed, in a quasi-employee role. The day laborer was paid in drugs rather than cash. The rapid consumption of such returns ensured a steady and cheap labor supply.

Drug distribution and violence. In America, research about the links between "hard drugs" and violence has revealed some important, but not obvious, insights. Most research conducted in

the late 1980s and 1990s has focused upon the role of drugs in homicide events. Unexpected, relatively few homicides occur because someone is killed during a robbery or theft committed by a drug user seeking funding for their drug habit. Rather, substantial proportions of homicides involve a pharmacological effect; the perpetrator was high, or under the influence, following heavy drug consumption.

Guns and distributors. More homicides involved systemic violence, involving conflicts within and among drug distribution groups. A common homicide involved a supplier who killed a seller or lower-level distributor failing to return money or drugs. Another common homicide was for rival sellers or distribution groups to kill one another. An explosion of handguns in the 1980s made their way into the hands of younger members of drug distribution groups (Blumstein and Wallman, 2000). Imposition of strong gun controls, combined with removal of guns from civilian populations, helped reduce killings.

Distribution associated with property crime and sex work. Drug consumers without legal jobs and stable legal income usually engage in what they call “hustles,” a variety of activities that often violate the criminal code or moral standards of conventional society. The typical offender does a wide variety of illegal activities (Johnson et al., 1985). Illegal hard drug sales and transactions have become the hustle that is most lucrative, but have the highest prison penalties. Persons who routinely sell heroin, cocaine, crack, yet evade police and robbers, can earn large incomes. In the 1990s, many female heroin/crack users shifted to crack sales, and if successful, reduced their shoplifting or sex work (Maher, 1997; Dunlap et al., 1997; Fagan, 1994a). Male drug sellers appeared less likely to engage in robbery or burglary than in the past (Fagan, 1994b).

IMPLICATIONS AND ISSUES ASSOCIATED WITH DRUG DISTRIBUTION

Do Supply Interdiction Strategies Work?

These strategies do not work to reduce substantially the overall supplies of various drugs (MacCoun and Reuter, 2001; Stares, 1996). While spending millions to eradicate poppies or coca leaf, the United States and Europe have never chosen to pay directly peasants for nonproduction and/or for the resulting crops. Such interdiction and supply reduction have managed to suppress substantially cultivation in specific nations such as Peru and Bolivia, but production seems to increase elsewhere (in Brazil and Columbia for example). Drug production cartels systematically seek locales with very low likelihood of detection and interruption. Estimates of world production of heroin and/or cocaine have remained stable or increased over the past decade. The retail prices of heroin and cocaine has declined substantially in the past decade.

Do “Tough Laws” and Long Prison Terms Stop Illicit Distribution?

No!! Few drug distributors stopped sales due to long sentences. They changed their sales tactics in some way to be less visible, to stash their drugs in hidden locations, or moved around more to appear as part of ordinary pedestrian traffic. Such laws had no measurable/discernable impact upon drug sellers nor the availability of heroin, cocaine, or crack (Fagan, 1992; Davis and Johnson, 2000; Johnson et al., 1995). Tough laws in the United States are primarily used to coerce guilty pleas to lesser (but very lengthy) sentences from arrested sellers. Long prison sentences for those convicted of heroin and crack sales dramatically expanded (from about 500,000 in 1980 to over 1,900,000 in 2000) jail/prison populations in the United States. (Bureau of Justice Statistics, 2001).

Do “Tough Laws” Stop or Greatly Reduce Illegal Drug Use?

No!! Such laws have had no measurable effect upon patterns of the use of heroin, cocaine, or crack. Generation, ethnic, and gender factors have a much more pronounced effect on drug consumption patterns (Golub and Johnson, 1997,1999). Generational shifts away from heroin and crack have dramatically reduced markets and profitability of drug selling as a career for thousands of unemployed inner-city youths (Johnson et al., 2000). Several articles have documented dramatic shifts in illicit drug preferences across generational cohorts of arrestees, briefly described here (Golub and Johnson, 1997,1998,1999,2001a,b,2002a,b,c;Johnson et al., 2000;Kandel, 2002;Lipton and Johnson, 1998).

Heroin generation: In New York City, arrestees born from 1945–1954 were very likely to become heroin abusers, this cohort has remained as the major pool of heroin users and injectors to the current time. Arrestees born from 1955–1969 and after 1970 were much less likely to try or inject heroin.

Crack generation: Arrestees born from 1955–1969, tended to avoid heroin, but became (and remain in 2002) those who preferred crack cocaine and cocaine smoking.

Marijuana/blunts generation: Arrestees born from 1970 and later have strong norms against heroin and crack use. This generation prefers “blunts”; they consume marijuana placed within a low-price cigar.

Can Effective Policing/Enforcement Greatly Reduce Public Visibility of Illicit Distribution?

A qualified yes! The generational change in youthful drug preference from crack to blunts (marijuana) also coincided with one of the most intensive crackdowns on drug sellers and users ever mounted. During the 1990s to the current time, New York City has expanded the size of its police force, greatly improved its targeting and management of police resources, and expanded the number of offenses resulting in arrest—all to substantially reduce crime rates. Very substantial police resources were devoted to keeping guns and illegal drug sellers off the streets. This large and frequent police presence directed against street-level drug sellers has dramatically reduced the public visibility of selling. (Johnson et al., 2000;Golub et al., 2002, 2003).

Varied and intensive police enforcement activities have broken up the street-level “drug supermarkets” of the late 1980s, ended numerous well-organized dealing operations, and imprisoned many dealers. Almost all arrests result in detention or short stay in jail (or similar penalty). Former locations with heavy street sales are carefully monitored by police and neighborhood organizations (Johnson et al., 2000).

Do Illegal Sellers Still Evade Police Controls?

The sales tactics of hard drug sellers have changed dramatically as a result. In the 1980s, drug sellers on the streets and parks would approach almost all passersby to buy drugs. No longer!! Street sellers now keep a very low street profile and usually restrict sales to known purchasers. The determined heroin or crack user can still obtain the drug(s) of preference from a seller at a public location near their residence or hang outs. Sellers and buyers now systematically cooperate to conceal their illegal transactions from the citizenry and especially from undercover police. But the vast majority of arrestees in New York report that they purchase their heroin and crack in public locations and for lower prices than their counterparts in other U.S. cities. (NIJ, 2003).

What Types of Enforcement Activities Work Best?

Gun controls are the best way to reduce the severity (homicides or serious wounding) of conflicts among drug distributors. Police policies targeting guns and gun carrying have reduced serious crimes (robbery, homicide, and gun possession) (Blumstein and Wallman, 2000). Police policies target those carrying guns and suspected of drug sales. With probable cause, persons with suspicious bulges are stopped and search. Searches often turn up illegal drugs. If an arrest or legal violation occurs in New York City, police policy require officers to take into custody, detain, and arraign, and require courts to impose a minor disposition (a fine or community service). Imposing short-term sanctions for apparently minor offenses have been effective at raising offender's awareness of the need to reduce the public visibility of sales activity or even minor behaviors (such as fare evasion, alcohol drinking in public). Policies focused upon identifying and monitoring the behaviors of persistent misdemeanants will capture a majority of daily hard drug users (Golub et al., 2003). Some of these persons also occasionally perform direct sales or low-level distribution roles.

What About a Police Policy of Not Enforcing Prohibitionist Policies?

The larger society has effectively mandated that police are responsible for enforcing the moral standards of the majority (no hard drug use or sale) upon the minority who use these drugs and who routinely cooperate to evade these restrictions and police tactics. Prohibitionist drug laws are both difficult and expensive for police to enforce effectively. One police policy is to focus only upon high (kilo-)level dealers while ignoring the multitude of small time sellers. A related policy is not to expend any police resources to enforce prohibitionist policies. In the long run, unfortunately, nonenforcement of prohibitionist policies may create as many or more problems as does the enforcement. Nonenforcement policies that permitted addicts to congregate and sell/use heroin in major public locations in Amsterdam and Holland became politically intolerable (MacCoun and Reuter, 2001).

How Do Subcultures of Illegal Sellers Respond?

The illicit drug subculture, led by its sellers and dealers, has proven remarkably resilient and determined to continue business as usual. Sellers have been remarkably adept at locating and exploiting every weakness in law enforcement. This subculture thrives within a police policy of nonenforcement. Such nonenforcement against low-level street sellers was associated with thousands of highly visible street-level sellers in the 1970s and 1980s in New York (Johnson et al., 2000). Due to fear of police corruption in New York, a police policy of nonenforcement (directed at minor sellers) existed for nearly two decades in the 1960s and 1970s. During that time, the heroin subculture (and later the crack subculture) developed an extensive network of street sellers, almost all of whom were regular consumers of these drugs. About 1970–1983, thousands of unemployed minority youths in the city took to the streets and parks where they openly sold illegal drugs to all comers. Some streets became drug supermarkets with hundreds of sellers and buyers competing for business. Conflicts among sellers, competing distributor organizations, and an explosion of illegal gun ownership were associated with the highest levels of violent crime and homicide ever known (outside of war conditions) (Blumstein and Wallman, 2000).

How Does Drug User Treatment Impact upon Illegal Drug Distribution?

Over the years, criminal justice practitioners have come to two conclusions regarding drug-involved offenders (a majority of arrestees in New York and elsewhere):

- The cycle of arrest, jail, prison, probation does little to deter the drug consumption and minor criminality of hard-drug-using offenders.

- Mandating various forms of drug user treatment, with enforced attendance, may be the optimal policy for reducing persistent selling or offending behavior.

Drug selling and involvement in low-level distribution roles is one type of offending behavior upon which drug user treatment has an immediate and direct impact. If and when user-sellers of hard drugs are enrolled and actually attend drug user treatment sessions, their involvement in illicit drug distribution roles is reduced by 50%–80% (Wexler et al., 1988). This is a more substantial reduction than their use of these substances and often greater than their reductions in nondrug offending (robbery, burglary, theft, and sex work). This is regardless of the appropriateness and quality of the treatment program entered (Magura, 2001).

How About Harm Reduction Approaches?

Harm reduction approaches (such as providing legal needles and condoms) to injection drug users (IDU) may improve the health of individuals and reduce risk to their sexual partners—important ends to achieve in themselves (Johnson et al., 2001). Almost no data suggests that such policies have a direct impact upon IDU involvements in drug distribution (Natarajan and Hough, 2000). However, making methadone easily available to IDUs (as a form of short-term (e.g., detoxification or via methadone buses) and long-term treatment (e.g., methadone maintenance) have repeatedly shown to be associated with reductions in distribution behaviors (Ball and Ross, 1991).

Some Policies Not Considered

It merits noting that New York City and other U.S. cities have never considered the possibility of allowing illicit drug users to have “safe houses” or clinics in which to consume illegal drugs. Nor can the Dutch policy of “separation of markets” be considered in America in the current political climate (Cohen and Kaal, 2001; MacCoun and Reuter, 2001).

What Other Policies Are Successful?

One international policy has been extremely effective, yet researchers or policy makers rarely consider it as even part of the “illegal drug control” problem. The international control policies adopted before and implemented after World War I have been dramatically successful in restricting access to a wide range of potentially dangerous pharmaceutical products (morphine, other opiates, cocaine and its derivatives among them) to medical channels. Much could be learned about whether and how a medical regulatory system might be able to undermine the illicit drug distribution system.

DISCUSSION

American drug policy toward hard drug sellers and distributors represents the triumph of symbolic politics over policies that might provide modest improvements in reducing illicit drug distribution.

The enforcement of prohibitionist policies that stress short-term punishments combined with treatment seem to be most effective in both the short and long run, and at least cost. When police target drug distributors, especially those operating in public locales, and make repeated stops/searches of those locales, sellers get the message to move on or very carefully conceal their activities from public view. If persons are found possessing and selling hard drugs, then making arrests, detaining offenders, and imposing nontrivial dispositions works as well as any other enforcement policy.

Including mandatory drug user treatment with consistent follow-up has among the best outcomes. By contrast, enforcement policies (as in New York), which stress prosecution of

small sellers and low-level distributors, and setting very low quantities as indicators of felony sales, does not work as effectively. Such harsh policies means that many resources are diverted into court processes to coerce guilty pleas from a limited number of persons. The costs of incarcerating such persons for many years are very substantial and has no documented reductions in the illegal sale of drugs, in the price of such substances, nor improvements in the quality of living standards of the community.

GLOSSARY

Brief scientific definitions of key terms and concepts are given in the body of the text.

Acknowledgements

The research summarized herein relies upon several research projects funded between 1980 to the present by the National Institute of Drug Abuse and the National Institute of Justice in the United States. I especially thank my colleagues, Eloise Dunlap and Andrew Golub, as well as many other staff who conducted the research. They remain valued collaborators and coauthors of numerous articles and reports emerging from the work that informs this article.

References

- Ball, J.; Ross, A. *The Effectiveness of Methadone Treatment*. New York: Springer-Verlag; 1991.
- Blumstein, A.; Wallman, J., editors. *The Crime Drop in America*. New York: Cambridge University Press; 2000.
- Bureau of Justice Statistics. *Prisoners in 2000*. Washington, DC: 2001.
- Cross J, Johnson BD, Davis RW, 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]
- Cohen, P.; Hendrien, DA.; Kaal, L. *The Irrelevance of Drug Policy*. Amsterdam: CEDRO; 2001.
- Courtwright, D. *Dark Paradise: A History of Opiate Addiction in America*. Cambridge, MA: Harvard University Press; 2001.
- Davis WR, Johnson BD. Criminal justice contacts of hard drugs users and sellers in Harlem. *Albany Law Review* 2000;63:101–145.
- Dunlap E, Johnson BD, Maher L. Female crack dealers in New York City: who they are and what they do. *Women and Criminal Justice* 1997;8(4):25–55.
- Fagan, J. Drug selling and licit income in distressed neighborhoods: the economic lives of street-level drug users and dealers. In: Harrell, A.; Peterson, G., editors. *Drugs, Crime, and Social Isolation: Barriers to Urban Opportunity*. Washington, D.C.: Urban Institute Press; 1992. p. 99–146.
- Fagan J. Women and drugs revisited: female participation in the cocaine economy. *Journal of Drug Issues* 1994a;24(2):179–226.
- Fagan, J. Do criminal sanctions deter drug crimes?. In: MacKenzie, Doris L.; Uchida, Craig, editors. *Drugs and the Criminal Justice System: Evaluating Public Policy Alternatives*. Newbury Park, CA: Sage; 1994b. p. 188–214.
- Golub AL, Johnson BD. The shifting importance of alcohol and marijuana as gateway substances among serious drug abusers. *Journal of Studies on Alcohol* 1994a;55(5):607–614. [PubMed: 7990471]
- Golub AL, Johnson BD. Cohort differences in drug use pathways to crack among current crack abusers in New York City. *Criminal Justice and Behavior* 1994b;21(4):403–422.
- Golub AL, Johnson BD. A recent decline in cocaine use among youthful arrestees in Manhattan (1987–1993). *American Journal of Public Health* 1994c;84(8):1250–1254. [PubMed: 8059880]
- Golub, AL.; Johnson, BD. *Research in Brief*. Washington, D.C.: National Institute of Justice; 1997. Crack's decline: some surprises across U.S. cities.
- Golub A, Johnson BD. Alcohol is not the gateway to hard drug abuse. *Journal of Drug Issues* 1998;28(4):971–984.
- Golub A, Johnson BD. Cohort changes in illegal drug use among arrestees in Manhattan: from the heroin injection generation to the blunted generation. *Substance Use and Misuse* 1999;34(13):1733–1763. [PubMed: 10540971]

- Golub, A.; Johnson, BD. Research in Brief. Washington, DC: National Institutes of Justice NCJ 187490; 2001a. The rise of marijuana as the drug of choice among youthful arrestees.
- 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* 2001b;91(2):225–232. [PubMed: 11211630]
- Golub, A.; Johnson, BD. Substance use progression and hard drug abuse in inner-city New York. In: Kandel, Denise B., editor. *Stages and Pathways of Involvement in Drug Use: Examining the Gateway Hypothesis*. New York: Cambridge University Press; 2002a. p. 90-112.
- Golub, A.; Johnson, BD. *Encyclopedia of Criminology and Deviant Behavior*. 1. Great Barrington, MA: Berkshire; 2002b. The arrestee drug abuse monitoring program; p. 62-64.
- Golub A, Johnson BD. The misuse of the “gateway theory” in U.S. policy on drug abuse control: a secondary analysis of the muddled deduction. *International Journal of Drug Policy* 2002c;13(1):5–19.
- Golub A, Johnson BD, Sifaneck SJ, Chesluk B, Parker H. Is the U.S. experiencing an incipient epidemic of hallucinogen use? *Substance Use and Misuse* 2001;36(12):1699–1729. [PubMed: 11758819]
- Golub A, Johnson BD, Taylor A, Liberty H. The validity of arrestee self-reports: variations across questions and persons. *Justice Quarterly* 2002;19(3):477–502.
- Golub A, Johnson BD, Taylor A, Eterno J. Does quality-of-life policing widen the net? A partial analysis. *Justice Research and Policy*. 2003in press
- 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.; Dunlap, E.; Tourigny, SC. Crack distribution and abuse in New York City. In: Natarajan, M.; Hough, M., editors. *Illegal Drug Markets: From Research to Policy*. 11. Monsey, NY: Criminal Justice Press; 2000. p. 164-206. *Crime Prevention Studies*
- Johnson, BD.; Golub, AL. Generational trends in heroin use and injection in New York City. In: Musto, D., editor. *One Hundred Years of Heroin*. Westport, CT: Auburn House; 2002. p. 91-130.
- Johnson, BD.; Golub, A.; Dunlap, E. The rise and decline of drugs, drug markets, and violence in New York City. In: Blumstein, A.; Wallman, J., editors. *The Crime Drop in America*. New York: Cambridge University Press; 2000. p. 164-206.
- Johnson BD, Golub AL, Fagan J. Careers in crack, drug use, drug distribution, and nondrug criminality. *Crime and Delinquency* 1995;41(3):275–295.
- Johnson BD, Maher L, Friedman SR. What public policies affect heroin users? *Journal of Applied Sociology* 2001;18(1):14–49.
- Johnson, B.; Williams, T.; Dei, K.; Sanabria, H. Drug abuse and the inner city: impact on hard drug users and the community. In: Tonry, M.; Wilson, JQ., editors. *Drugs and Crime*. 13. Chicago: University of Chicago Press; 1990. p. 9-67. *Crime and Justice Series*
- Kandel, DB., editor. *Stages and Pathways of Involvement in Drug Use: Examining the Gateway Hypothesis*. New York: Cambridge University Press; 2002.
- Lipton DS, Johnson BD. Smack, crack, score: two decades of NIDA-funded drugs and crime research at NDRI, 1974–1994. *Substance Use and Misuse* 1998;33(9):1779–1815. [PubMed: 9718180]
- MacCoun, RJ.; Reuter, P. *Drug War Heresies: Learning from Other Vices, Times, and Places*. New York: Cambridge University Press; 2001.
- Magura, S., editor. *Substance Use and Misuse*. 37. 2001. Special issue on treatment quality.
- Maher, L. *Sexed Work: Gender, Race and Resistance in a Brooklyn Drug Market*. Oxford: Oxford University Press; 1997.
- Massing, M. *The Fix*. New York: Simon and Schuster; 1998.
- Morales, E. *Cocaine: White Gold Rush in Peru*. Tuscon: University of Arizona Press; 1989.
- Musto, D. *The American Disease: Origins of Narcotic Control*. 3. New York: Oxford University Press; 1999.
- Musto, D., editor. *One Hundred Years of Heroin*. Westport, CT: Auburn House; 2002.
- Natarajan, M.; Hough, M., editors. *Crime Prevention Studies*. 11. Monsey, NY: Criminal Justice Press; 2000. *Illegal Drug Markets: From Research to Policy*.

National Institute of Justice. 2000 Arrestee Drug Abuse Monitoring: Annual Report. Washington, D.C.: NCJ 193013; 2003.

Stares, PB. Global Habit: The Drug Problem in a Borderless World. Washington DC: Brookings Institution; 1996.

Wexler, H.; Lipton, D.; Johnson, BD. Research in Brief. Washington, D.C.: National Institute of Justice, NCJ 113915; 1988. Criminal justice system strategy for treating cocaine-heroin abusing offenders in custody.

Biography

Bruce D. Johnson, Ph.D. (USA), Sociology, is one of America's authorities on crime and illicit sales of drugs in the drug street economy and among arrestees and minority populations. Currently, he directs the Institute for Special Populations Research at National Development and Research Institutes, the nation's largest nonprofit research organization focused upon drug use/abuse (located in Manhattan). He is a professional researcher having published five books and over 120 articles based upon findings emerging from over 20 different federally funded research projects funded by the National Institute on Drug Abuse, National Institutes of Justice, Center for Substance Abuse Treatment, and the Robert Wood Johnson Foundation.

His recent work has appeared in *American Journal of Public Health*, *Journal of Quantitative Criminology*, *British Journal of Criminology*, as a chapter in Blumstein and Wallman's book on *The Crime Drop in America*, and in several other journals and books. A major research project in the 1990s was specifically focused upon crack distribution and its use, but he has also studied patterns of selling of heroin and marijuana in earlier research.

Current research efforts include drug abuse patterns among arrestees and criminals, the impact of police initiatives upon criminal behavior, estimate the number of hard drug users and operatives, new drug detection technologies, marijuana and blunts use and sale, and violence in drug-using households. He also directs the nation's largest pre- and postdoctoral training program in sociology, psychology, anthropology, and public health in the United States. He is a member of the editorial board of *Substance Use and Misuse* and has been a faculty member of the Middle Eastern Summer Institute on Drug Use (MESIDU/MEMSIDU) in Israel and Italy.