Exploring the Drugs-Homicide Connection

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What is This?
Exploring the Drugs-Homicide Connection

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The relationship between drugs and homicide has been well documented for some period of time. Drugs can play many different roles in homicide events. Drug homicides are disaggregated into peripheral drug homicides and drug-motivated homicides. In the former, drugs were present at the scene or drugs were being used by the victim or offender but were not the central causal feature of the event. In the latter, the sale or use of drugs was the primary cause of the lethal interaction. Using multinomial logistic analysis, we analyze the extent to which individual, situational, and contextual factors discriminate between different drug-homicide events. We found variables indicative of risky lifestyles were significant predictors of the different types of drug homicides. More important, findings suggest the variables considered in the multivariate model had different effects on different measures of the dependent variable. Policy implications are discussed.

Keywords: drugs; homicide; violent crime; tripartite framework

Although research generally assumes a close relationship between drugs and violence, very little is known about the many different roles drugs can play in criminal events. Drug related as an event classification scheme is relatively common in homicide research, as well as other areas of inquiry, and is usually understood to be an important component in the causal processes of criminal events. Yet such classification schemes often suggest a simple, unidimensional construct. In reality, drug-related crimes are com-
plex events. The purpose of this research was first to disaggregate the concept of drug-related homicide by providing an event classification scheme that conceptualizes the diverse roles drugs play in drug-related events. A categorical coding scheme is presented that is similar to that proposed by Goldstein (1995) and later tested by Brownstein and colleagues (Brownstein & Goldstein, 1990; Brownstein, Baxi, Goldstein, & Ryan, 1992) that specifies three distinct types of homicide events. Included among these are (a) events that involved no evidence of illicit drugs associated with the homicide event, (b) those that involved the presence of drugs or drug use at the scene as well as events where either the victim and/or offender were buying or selling drugs (we term this *peripherally drug-related homicides*), and (c) events where the sale or use of drugs was the motivating feature of the homicide event. In some situations, there may be overlap between categories b and c; however, category c is distinct in that it includes features of motivation. The second purpose was to determine the relative importance of various situational and contextual characteristics of homicide events in understanding different types of drug-related events. Delineating these features will be an important step in filling in the gaps of knowledge about the assumed relationship between drugs and violence.

**LITERATURE REVIEW**

Connections between the use of drugs and crime are not new but have been exposed for much of history (Weil, 1995). The 1938 movie *Reefer Madness* was an iconic representation of the connection made in popular culture between drug use and undesirable behavior. More recent attention to the relationship is based, in part, on crime trends that indicate a simultaneous spike in violent crime and an emerging crack-cocaine market during the 1980s. Researchers noted a sharp increase in violent crime, especially murder and robbery, from approximately 1985 through the early 1990s. Common wisdom attributed the rising homicide rates to increases in arrests of young urban dwellers armed with firearms.

Crack cocaine made its way into urban communities in the United States in 1985. As an inexpensive alternative to powder cocaine that was available in...
single hits, the crack market flourished at an unprecedented rate (Blumstein, 1995). Early crack markets quickly grew into high volume industries as greater numbers of individuals made more frequent buys. Market growth forces created a need for large numbers of new sellers, a market demand that was filled largely by young Black men. In many ways, these new entrepreneurs were an ideal source of labor. Young urban Black men were excluded from the legitimate labor market at a rate much higher than their older, suburban, and nonminority counterparts. They were also more willing to work at cheaper rates because, as suggested by Blumstein (1995), “They may be less vulnerable to the punishments imposed by the adult criminal justice system” (p. 30). Younger individuals were also perceived to be more daring and less risk averse. In the end, younger individuals who were more likely to carry firearms and use violence became an integral part of the crack cocaine market (Blumstein, 1995; Blumstein & Rosenfeld, 1998).

The association between drugs and crime is evidenced through a variety of data sources. Official crime statistics indicate that the involvement of poor young minority men as victims and offenders of serious violent crime grew at an alarming rate during much of the late 1980s and into the 1990s. Murder arrest rates for 18-year-old individuals almost tripled between 1985 and 1992 from approximately 25 to 60 per 100,000 (Blumstein & Rosenfeld, 1998). During the same period, drug arrest rates for non-White urban youth also nearly tripled while rates for White youth decreased. Data from the Arrestee Drug Abuse Monitoring Program (ADAM) indicate that between 40% and 80% of adult male arrestees tested positive for cocaine use in 1998 (ADAM, 2000). MacCoun, Kilmer, and Reuter (2003) also reported that approximately 30% of state and federal inmates incarcerated for robbery or breaking and entering reported they committed the offense to acquire drugs. In one study of 500 incarcerated felons in Michigan, approximately one half reported they purchased and sold drugs nearly every day before their incarceration (Bynum, Huebner, & Hinduja, 2001). Thus, a large percentage of individuals involved in serious crime are heavily involved in the sale and use of drugs.

Many criminal justice officials strongly believed the sale or use of drugs was one of the primary factors behind violence in the 1980s and 1990s. Local government officials often report drugs near the top of the most important factors underlying homicide rates (Lattimore, Trudeau, Riley, Leiter, & Edwards, 1997, p. 72). The drugs-violence relationship is most often associated with crack cocaine; however, some officials report changing marijuana markets as emerging sources of violence. It is interesting to note these perceptions seem to be more driven by news accounts of national trends than analyses of local drug-use indicators.
Involvement of Drug Circumstances in Homicide Events

Drugs play a prominent role in homicide events. Research indicates that more than one half of all homicides may involve drug circumstances (Brownstein et al., 1992). In an analysis of all homicide incidents that occurred in St. Louis between 1985 and 1989, Rosenfeld (1991) reported 26% were drug related. Drug related referred to instances where an event was identified as such in the police case file or where the victim, offender, or aspects of the homicide incident were identified as associated with the sale or use of narcotics.

Although a substantial percentage of homicide incidents in places such as St. Louis are considered drug related, the relative level of drug-related homicides appears to vary by city—a difference presumably linked to features of local drug markets. In a study of Latino homicide, Martinez (2002) reported steady and substantial decreases in drug-related homicide rates in Miami between the years 1985 and 1995 while Chicago’s rate was static. In contrast, the rate of drug-related homicides among Latino victims in San Diego increased dramatically between 1985 and 1992 and then decreased just as dramatically from 1993 to 1995. Although there is no definitive explanation for these varying trends, they likely can be attributed, at least in part, to differences in market stability as observed in places such as New York City (see Fagan & Chin, 1989).

Other studies have confirmed the prevalence of drug circumstances in homicides across the nation. In a study of nearly 800 homicide cases in four different cities throughout the United States, Wellford and Cronin (1999) reported that approximately one fourth of all homicides were drug-related offenses. The drug-related category was substantially more common in open cases (41%) compared to closed cases (23%) (pp. 11-13). Varano and Cancino’s (2001) analysis of nearly 10,000 homicide events from Chicago between 1975 and 1995 indicated that approximately 8% were considered drug-motivated events. Although 8% represents a reasonably small proportion of events, the motivated classification represents only those cases where the “sale or use of illegal narcotics was the motivating factor for the lethal altercation” (Varano & Cancino, 2001, p. 13), a classification scheme that is much more restrictive than drug related.

Drug motivation or the presence of drugs not only are the prevalent characteristics of homicide events but also have implications for understanding certain features of homicide events. Wellford and Cronin (1999) reported certain features of drug involvement in homicide events significantly reduced the likelihood of clearance for such cases. It is most important to note that cases were 46% less likely to be cleared if the victim had a history of drug use, 46% less likely if the victim had a history of association with drug deal-
ers and users, and 35% less likely if the victim was identified as a drug buyer or had a prior drug arrest (Wellford & Cronin, 1999, Tables 12 & 13). It seems, however, the importance of these characteristics was relevant only as they relate to victims, not offenders. For example, of those drug-related victim characteristics just mentioned only offender identified as drug buyer significantly reduced the odds of clearance (57% reduction).

Conceptual Links Between Drug Use and Violence

Goldstein (1995) proposed the notion of the tripartite framework for understanding the multiple causal roles drugs can play in violent behavior. Drugs and violence may be connected through psychopharmacological effects of the drugs, economic-compulsive behavior associated with the desire to get money to buy drugs, or systemic or normal violence associated with drug markets.

First, violence may be a result of psychopharmacological effects of drug use itself. Individuals using alcohol, stimulants, barbiturates, or related substances may experience a psychological episode that results in unusual or unpredictable behavior. This behavior could be the result of drug-induced erratic behavior that is commonly associated with drugs such as PCP, or a result of irritability associated with certain symptoms of withdrawal. A narrative description of a psychopharmacological event is provided by Brownstein and colleagues (1992):

A 29-year-old woman and a 41-year-old man were living together for eight years in a common law marriage. They had two children together. He believed that she was seeing other men. In addition, she had a job and he did not; he felt belittled by the fact that he was out of work. So they often fought. During one fight, when he was high on alcohol and cocaine, he lost control. He grabbed a kitchen knife that she was holding and stabbed her repeatedly. She died of multiple stab wounds to the body (Case #100). (p. 34)

Second, economic-compulsive behavior denotes the type of violence associated with the desire to obtain sufficient monetary resources to procure drugs. In this case, the violence is perpetuated not by psychopharmacological impulses, but instead the compulsion to obtain money to purchase drugs. Approximately one third of state and federal inmates incarcerated for robbery or breaking and entering reported they committed the offense to acquire money to purchase drugs (MacCoun et al., 2003). Wright and Decker’s (1997) ethnographic study of armed robbers clarifies this connection. In explaining the decision to conduct an armed robbery, one research participant reported:
I like to mix and I like to get high. You can’t get high broke. You really can’t get high just standing there, you got to move. And in order to move, you got to have some money. . . . Got to have some money, want to get high (No. 14). (Wright & Decker, 1997, p. 35)

The final aspect of Goldstein’s tripartite framework is systemic violence. In contrast to the former, systemic violence is the violent behavior associated with drug-related business interests. Drug markets are analogous to many other business environments where multiple competitors aggressively push their product while trying to exclude other local competitors. Similar to other legitimate industries, there are (to some degree) rules of the game that dictate proper business etiquette. These represent the rules that govern business transactions. A substantial amount of drug violence is associated with strict enforcement of drug market–related business rules. Fagan and Chin (1989) attributed much of New York’s crack-related violence in the 1980s to systemic violence. Although conventional wisdom blamed the violent crack markets of the 1980s on drug-induced psychopathy, Fagan and Chin reported the increased levels of violence to problems associated with attempts to control unregulated drug markets. The crack epidemic discussed above occurred at a unique time when New York drug markets were not controlled by a central group of individuals. Instead, markets were highly decentralized and locally controlled. Large profit margins associated with unregulated markets resulted in high levels of violence as individuals fought for control of profits.

Classification Schemes for Drug-Related Homicides

Goldstein’s (1995) taxonomy is arguably one of the most influential ideas in criminal-event classification schemes since Wolfgang’s (1958) 11-point categorization of the victim-offender relationship more than 45 years ago. It represents one of the most widely accepted explanations for the drug-crime nexus to date.

Brownstein, Goldstein, and colleagues have applied the tripartite framework to two separate samples of homicides and have argued the scheme is useful for categorizing drug-homicide incidents. Approximately 40% \((n = 129)\) of the homicides that occurred in New York State (excluding New York City) in 1984 were considered drug related. Of the drug-related offenses, nearly 60% were considered psychopharmacological events, 21% systemic violence events, and 3% economic compulsive events (Brownstein & Goldstein, 1990, p. 177). The relative proportion of the different types of drug homicides appears dependent on time and/or location. In another sample of homicide incidents that occurred in New York City between March and October 1988 \((n = 414)\), the largest percentage of drug homicides were sys-
temic violence events (74%), followed by psychopharmacological (14%), and economic compulsive events (4%) (Brownstein et al., 1992, p. 33).

Rosenfeld’s (1991) analysis of St. Louis homicides also focused on drug-related events. Drug-related homicides (DRH) were deconstructed into drug-transactions, drug-role, and drug-use events. As aptly stated by Rosenfeld (1991), “Violent outcomes, including homicides, may result from the properties of drugs or from the properties of drug markets” (pp. 3-6). Events were classified as a drug transaction if they occurred during or in direct connection to the purchase or sale of drugs. Drug-role homicides involved victims or offenders in the role of seller, buyer, or both. They differ from the former in that they were not connected to a particular drug transaction but instead were connected to the drug market as a whole. Finally, the drug-use classification involves the use of drugs by the offender or victim on the same day as the incident. This scheme is strongly reminiscent of Goldstein’s psychopharmacological, economic-compulsion, or systemic violence.

Factors Differentiating Drug Events

Evidence supports the perception that there are important substantive differences between various types of drug-related homicides. Rosenfeld (1991) reported drug-use events involved a greater number of personal weapons such as a knife (28%), while almost 90% of drug-transaction and drug-role events involved firearms (pp. 3-15). A larger percentage of drug-use events also involved victims and offenders who were closely connected with each other (e.g., 49%) compared to drug-transaction (12%) or drug-role homicides (13%). In terms of motives, a substantially higher percentage of drug-transaction and drug-role events were motivated by economic issues. For example, 33% of motives for drug-transaction events were coded as “bad deal,” 21% as “bad debt,” and 19% as “rip off.” In strong contrast, almost 80% of drug-use events were motivated by drug-induced behavior (e.g., Goldstein’s psychopharmacological violence).

Research findings also suggest drug and nondrug events can be differentiated based on victim and offender characteristics. In St. Louis, drug-related events involved a significantly larger proportion of younger victims and offenders between ages 22 and 27 years than non-drug-related events (Rosenfeld, 1991, pp. 3-12). In the latter incidents, victims and offenders tended to be older. Victims and offenders in drug-related homicides were also more likely to be African American, male, and involve a gun as the central weapon. Drug-related homicides involved a significantly larger percentage of victims and offenders classified as acquaintances compared to those with close personal relationships.
Situational differences among the various types of drug-involved events have been confirmed elsewhere. Brownstein and colleagues (1992) reported non-drug-related homicides were more likely to involve strangers (30% compared to 13% for drug-related events) and more likely to involve unknown victim-offender relationships (23% for non-drug-related compared to approximately 8% for drug-related events) (p. 35). The authors also reported that a greater percentage of drug-related offenses occurred in known drug locations, involved perpetrators and victims who were known drug users and traffickers, and involved perpetrators and victims with prior arrests for drug possession and sales (p. 37).

Goldstein’s taxonomy provides a meaningful framework for understanding the drugs-homicide nexus. The tripartite framework has had a considerable impact on the understanding of the drugs-homicide association; however, with a few notable exceptions, the framework has gone largely untested. The purpose of the current research is to advance the discussion of the drugs-homicide nexus by proposing a classification scheme that is similar to that proposed by Goldstein. Employing multivariate data analysis, we also intend to determine victim and situational characteristics important to differentiating such events.

**METHOD**

*Sample and Data*

Data were collected on 175 homicides that occurred throughout the city of Detroit between January 1999 and December 2002. The sample includes the entire population of homicides from one of Detroit’s 13 precincts (n = 129) and a subsequent random sample of citywide cases (n = 46) that occurred during the period identified above. The sampling frame was a list of all homicides recorded in the homicide book, a running log of incoming homicides maintained by the Homicide Section of the Detroit Police Department. The homicide book records vital information about all suspicious deaths that occur in the city including the date, time, and location of the incident. Also collected is the name of the victim, manner of death, and status field that tracks if the status of the death was later changed to natural or justifiable.

The larger set of cases was coded as part of a firearm-violence reduction program sponsored by the U.S. Attorneys Office. As part of the project, every nonjustified homicide that occurred in the target precinct during the 4-year period was coded by research staff. Project personnel were interested in understanding the factors underlying serious violent crime in this particular area of Detroit. To expand the representatives of the sample, the research staff...
also randomly selected and coded an additional 46 cases that occurred in other areas of Detroit during the same period.³

Homicides were coded using an instrument developed in previous research (see Wellford & Cronin, 1999). Many features of the incidents were coded including demographic characteristics and criminal histories of victims and offenders, and temporal and spatial characteristics of the event including date, time, and location. Data were also coded on various situational characteristics including gang involvement, apparent motive for the event, and level of drug involvement.

Dependent Variable

The dependent variable is a measure of drug relatedness gleaned from the official homicide case files in our sample. This included coding aspects of the homicide event such as whether drugs were present at the scene, if the victim or offender were buying or selling drugs at the time of the incident, or if the event were drug motivated such as a killing of a rival drug dealer. As presented in Table 1, we chose to create a three-category variable of cases where no relationship to drugs was found (50%); cases where evidence of drug use, sales, or purchase was found (31%); and cases where drugs provided a direct motivation for the homicide (19%). Table 1 also details the degree of overlap between groupings. As one might surmise, drug-motivated homicides also included proportionately more peripheral elements, as coded from the files and presented in Table 1. Narrative examples of each category, from the homicide files, are presented in the Appendix as illustrations. Below we contrast these levels of drug relatedness (nondrug related, peripherally drug related, and drug motivated) in a multivariate model.

The coding scheme for the dependent variable is similar to that proposed by Goldstein (1995) and later tested by Brownstein and colleagues (Brownstein et al., 1992; Brownstein & Goldstein, 1990) but also differs in important ways. In fact, the coding more closely resembles that proposed in Rosenfeld’s (1991) comparison of drug-use and drug-transaction homicides with the added category of drug-motivated incidents. Most notably missing from the current operational definition of the dependent variable from that proposed by Goldstein is a category that reflects psychopharmacological classification. Although we support the proposition that the category is conceptually meaningful, actually determining if an event was caused by a drug-induced psychopathic episode was exceedingly difficult. In situations where violence erupts after the use of drugs, it is often impossible to determine if the violence was a cause of the drug use or merely incidental to its use. Referring to the homicide description provided by Brownstein and colleagues (1992)
### TABLE 1

**Categorical Measure of Drug Relatedness (N = 175)**

<table>
<thead>
<tr>
<th>Subcategories of drug influences coded from homicide records</th>
<th>No Drug Presence (n = 88; 50%)</th>
<th>Peripheral Drug Presence (n = 54; 31%)</th>
<th>Drug Motivated (n = 33; 19%)</th>
<th>Proportion of All Homicides With Characteristic</th>
</tr>
</thead>
<tbody>
<tr>
<td>No drug</td>
<td>88 (100%)</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>88 (51%)</td>
</tr>
<tr>
<td>Drugs or paraphernalia on scene</td>
<td>0 (0%)</td>
<td>21 (39%)</td>
<td>23 (70%)</td>
<td>44 (25%)</td>
</tr>
<tr>
<td>Victim or offender possessing drugs</td>
<td>0 (0%)</td>
<td>24 (44%)</td>
<td>24 (73%)</td>
<td>48 (27%)</td>
</tr>
<tr>
<td>Victim or offender consuming drugs</td>
<td>0 (0%)</td>
<td>13 (24%)</td>
<td>12 (36%)</td>
<td>25 (14%)</td>
</tr>
<tr>
<td>Victim or offender selling drugs</td>
<td>0 (0%)</td>
<td>38 (70%)</td>
<td>30 (91%)</td>
<td>68 (39%)</td>
</tr>
<tr>
<td>Sale or use was motivation for homicide</td>
<td>0 (0%)</td>
<td>0 (0%)</td>
<td>33 (100%)</td>
<td>33 (19%)</td>
</tr>
<tr>
<td>Category total</td>
<td>88 (50%)</td>
<td>54 (31%)</td>
<td>33 (19%)</td>
<td>175 (100%)</td>
</tr>
</tbody>
</table>

**NOTE:** Raw numbers reported, percentages of within-category cases in parentheses for subcategories.

a. Peripheral elements.
and detailed above, we argue it can be difficult to accurately make the determination that the violence was a result of drug use.

**Independent Variables**

The independent measures capture aspects of the location of the homicide, the characteristics of the victim, as well as suspect, and situational characteristics and are presented in Table 2. First, we measured whether the neighborhood within which the event occurred was an active drug market. The scout car area within which the homicide occurred was ranked on the level of reported drug offenses within its border during the year that the homicide was recorded. Detroit is divided into 133 scout car areas (approximately 1-square-mile geographic subdivisions). The homicide events included in the sample were geocoded using ARC VIEW 8.2 and placed in the corresponding scout car area. Homicide events that occurred in scout car areas that were in the highest quartile of narcotics reports were considered to be within drug markets. Using this operationalization, 17% of the homicides in our sample occurred in areas characterized as drug markets. It should be noted that during the 4-year period, 42 different areas were ranked in the top quartile; of those 42, however, one half were highly ranked in 3 or more of the years, indicating that they had characteristics suggestive of persistent drug markets.

With respect to victim characteristics, four variables were employed. Gender was measured with a dummy variable (1 = male), and 79% of the victims in our sample were males. Victim minority status was measured as a dummy variable (1 = minority), and 89% of the sample victims were minorities, with African Americans comprising the entire category. A variable capturing youthful victims between the ages 14 and 25 years was also dummy coded, with 29% of the victims falling in that age range. With respect to these characteristics, we would expect youthful and male victims, in particular, to be significant predictors of drug motivation when contrasted with nondrug events. The fourth victim characteristic, lifestyle, reflects victims’ prior involvement with drugs. Three indicators were coded from information in the homicide files that indicated (a) the victim had prior associations with known drug dealers, (b) the victim had prior evidence of drug abuse, and (c) the victim had an arrest history that included at least one drug arrest. Each indicator was dummy coded (1 = present, 0 = not present) and finally summed to create an index of prior drug involvement (ranging from 0 to 3). The mean level of the drug involvement index was .90 with 57% of the victims having no evidence of prior involvement with drugs. We would expect that level of involvement as measured by arrest, abuse, and association would be significant in making contrasts between drug and nondrug homicides.
TABLE 2
Descriptive Statistics

<table>
<thead>
<tr>
<th></th>
<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>M</td>
<td>SD</td>
</tr>
<tr>
<td>Outcome variable</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Drug relatedness</td>
<td>1.09</td>
<td>1.21</td>
</tr>
<tr>
<td>Explanatory variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Location variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Occurred in drug market (1 = Yes)</td>
<td>.17</td>
<td>.30</td>
</tr>
<tr>
<td>Victim variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (1 = Yes)</td>
<td>.79</td>
<td>.41</td>
</tr>
<tr>
<td>Minority (1 = Yes)</td>
<td>.89</td>
<td>.31</td>
</tr>
<tr>
<td>Age 14-25 (1 = Yes)</td>
<td>.29</td>
<td>.46</td>
</tr>
<tr>
<td>Drug lifestyle</td>
<td>.90</td>
<td>1.17</td>
</tr>
<tr>
<td>Situational variables</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gun homicide (1)</td>
<td>.86</td>
<td>.34</td>
</tr>
<tr>
<td>Victim-offender relationship&lt;sup&gt;d&lt;/sup&gt;</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Family</td>
<td>.15</td>
<td>.36</td>
</tr>
<tr>
<td>Friend&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.14</td>
<td>.35</td>
</tr>
<tr>
<td>Other acquaintance&lt;sup&gt;b&lt;/sup&gt;</td>
<td>.20</td>
<td>.40</td>
</tr>
<tr>
<td>Stranger&lt;sup&gt;d&lt;/sup&gt;</td>
<td>.51</td>
<td>.50</td>
</tr>
<tr>
<td>Unknown&lt;sup&gt;c&lt;/sup&gt;</td>
<td>.61</td>
<td>.49</td>
</tr>
</tbody>
</table>

a. Reference category in multivariate model.
b. Friend and other acquaintance categories were grouped for SHR comparison. It was not possible to clearly denote between these categories based on how the SHR data were coded.
c. Unknown/Missing victim-offender relationship was estimated for sample data.
d. Means may sum less than 100 due to rounding.
Our final measures capture offender and situational characteristics that may aid in predicting the drug relatedness of homicides in this sample. First, victim-offender relationship was operationalized with a series of dummy variables. The variables include family, friends, other acquaintances, and stranger. For each indicator, the value 0 reflects the absence and 1 the presence of the characteristic. We expect that nondrug events are more likely to involve those with closer personal relationships such as family or friends, and those involving drugs to involve victims and offenders with greater social distance (other acquaintances and strangers).

Victim-offender relationship (VOR) was missing for 23 of the incidents or approximately 13% of the sample. Missing VOR information is a common problem in homicide research. Supplemental homicide report data indicate that, on average, VOR information is missing for approximately one third of all homicide incidents (Decker, 1993). Prior research has handled missing VOR data in a number of different ways, everything from listwise deletion strategies that exclude such cases, to a variety of substitution or imputation models (see Regoeczi & Riedel, 2003 for a comprehensive discussion on the various ways of handling missing VOR data). Pampel and Williams (2000) and Regoeczi and Riedel (2003) have argued it is important to develop imputation models that provide reasonable estimations of missing values. They argued missing VOR data is most likely not a random process and exclusion of such cases may distort research findings. We utilized a multinomial logistic regression imputation process (see Pampel & Williams, 2000 for a more in-depth discussion) that estimated the missing value based on victim age, victim gender, victim minority status, victim history of drug involvement, involvement of firearm, and if the event occurred in a high drug-crime area. The model estimates a predicted probability for each category (family, friend, other acquaintance, and stranger) of the dependent variable based on known cases and assigns the predicted value to the category with the highest probability.

The modal category is stranger, with 51% of the cases falling in this category. We hypothesized that level of drug relatedness would be positively associated with greater relational distances between interactants. Finally, we measured whether the event included the use of a gun in the homicide with a dummy variable indicating the presence and use of a firearm. Consonant with the aforementioned research by Blumstein and Cork (1996), we suspected that gun usage is likely to be most strongly associated with drug-motivated homicides. As noted, all data were compiled and coded from the homicide case files in each of the 175 cases.
FINDINGS AND RESULTS

Because our dependent variable had three nominal categories we chose to analyze it using a multinomial logistic regression model available in SPSS 11.0. Multinomial logistic regression is a maximum likelihood technique similar to binary logistic regression except that it is used when the dependent variable has three or more unordered categories. The procedure estimates a series of binary regressions that compare each group to a baseline or reference group. In the current research, a regression equation was estimated for both drug-related categories of the dependent variable (peripheral drug involvement and drug-motivated homicides) and compares them to the reference category (nondrug homicides).

In Table 3 we present a multinomial regression model, which indicates the contrasts between nondrug events and peripheral and motivational drug involvement appear to be a matter of degree. Drug market location, it is surprising to note, played no role in predicting whether a homicide had any relationship, peripherally or in terms of motivation, with drugs. With respect to the victim’s characteristics, only youthful status was a significant predictor of drug-motivated homicide. Gender and minority status were not significant predictors. Nevertheless, the finding that youthful status was more than 4 times more likely to predict involvement in drug-motivated homicides comports with the arguments of Blumstein, Cohen, Cork, Engberg, and Tita (1999). With respect to victim characteristics, the index of drug involvement was significant in predicting peripheral and motivational aspects of homicides. Recalling that variable captured prior association with drug dealers, abuse, and arrest, a one-unit change increased the likelihood of peripheral involvement 5.5 times, when compared with non-drug-involved crimes. The odds ratio for the contrast between nondrug and drug-motivated crimes indicated that a one-unit increase in the index increased the likelihood of a drug motivated homicide by nearly 13 times. This comports with the lifestyle arguments proposed above; those involved, even on the periphery of the drug trade, are at risk for violence emanating from that illicit activity.

Two indicators of the offender’s status and the situation, the VOR and gun use in the homicide transaction, yielded significant predictors of peripheral and drug-motivated homicides. The VOR dummy variable for family was positively related to peripheral drug involvement, and as one might expect, in a drug trade characterized by some degree of familiarity among interactants, the dummy variable representing friends was a significant predictor of drug-motivated events. It is possible, therefore, that a high level of lethal, nondrug, stranger violence, associated perhaps with robbery, may be responsible for this pair of unexpected relationships. Finally, events in which guns were used to commit homicides were associated with an increased likelihood of periph-
eral and drug-motivated homicides when contrasted with nondrug events. Consonant with research on drug violence, the odds of drug motivation in the homicide event were nearly double the odds of peripheral drug involvement. This relationship is also supportive of the drug-gun nexus discussed earlier.

The model summary statistics provide details of the goodness of fit for the data. The model chi-square value tests if knowledge of independent variables accurately predicts the value of the dependent variable more efficiently than chance alone. The model achieved statistical significance ($\chi^2 = 124.37$, $df = 18$, $p < .001$). The Nagelkerke $R^2$ indicates that the independent variables explain a high degree of variation in the dependent measure.6

Overall, the model indicates that the location of homicide event and the demographic characteristics of the offender have little bearing on the type of drug involvement in the homicides in this sample. Rather victim’s lifestyle, as measured by prior involvement in drugs, the offender’s relationship with the victim, and the use of a firearm as a weapon all show associations with homicide events that were drug motivated and peripherally related to drugs.

### TABLE 3
Multinomial Logistic Regression Equations ($N = 175$)

<table>
<thead>
<tr>
<th>Location variables</th>
<th>Peripheral Drug Involvement</th>
<th>Drug-Motivated Homicides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Constant</td>
<td>$-4.28$</td>
<td>$1.59$</td>
</tr>
<tr>
<td>Drug market (1 = yes)</td>
<td>$-0.42$</td>
<td>$-1.01$</td>
</tr>
<tr>
<td>Victim gender (1 = male)</td>
<td>$0.85$</td>
<td>$-0.11$</td>
</tr>
<tr>
<td>Victim minority (1 = yes)</td>
<td>$0.55$</td>
<td>$0.59$</td>
</tr>
<tr>
<td>Victim age 14 to 25 years (1 = yes)</td>
<td>$0.14$</td>
<td>$1.48$</td>
</tr>
<tr>
<td>Drug lifestyle</td>
<td>$1.71$***</td>
<td>$2.56$***</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Situational variables</th>
<th>Peripheral Drug Involvement</th>
<th>Drug-Motivated Homicides</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gun homicide (1 = yes, 0 = no)</td>
<td>$1.41^*$</td>
<td>$1.99^*$</td>
</tr>
<tr>
<td>Victim-offender relationship (Reference = Stranger)</td>
<td>$1.92^{**}$</td>
<td>$1.87$</td>
</tr>
<tr>
<td>Family</td>
<td>$0.89$</td>
<td>$3.13^{***}$</td>
</tr>
<tr>
<td>Friend</td>
<td>$0.76$</td>
<td>$0.83$</td>
</tr>
<tr>
<td>Other acquaintance</td>
<td>$-0.15$</td>
<td>$1.27$</td>
</tr>
</tbody>
</table>

Model $\chi^2$ $124.37^{***}$

$df = 18$

Nagelkerke $R^2$ $0.58$

NOTE: VIF = variance inflation factor.

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$. 

Varano et al. / DRUGS-HOMICIDE CONNECTION 383
The separation of models is important because peripheral involvement was less strongly contrasted with nondrug events than drug-motivated crimes by those three kinds of independent predictors. In addition, drug motivation but not peripheral drug involvement also generated a statistically significant contrast for youthful victims.

**DISCUSSION AND CONCLUSION**

Drugs play an important role in violent interactions. Although drug (or alcohol) use is neither a necessary nor sufficient cause of violent events, there is a close connection between the use of mood-altering substances and the increased likelihood of violence. The drugs-violence link is thought to exist along three separate causal paths: caused by psychopharmological effects of drug use itself, the desire to obtain money to obtain drugs, or systemic violence associated with the drug business itself (Goldstein, 1989).

In this article, we give special attention to drug homicides. In particular, we argue although drug homicides can be considered a homogeneous subset of violence to some degree, they are, in fact, not a universal class of phenomena. Based in part on prior work by Rosenfeld (1991), Goldstein (1995), and Brownstein and colleagues (Brownstein et al., 1992; Brownstein & Goldstein, 1990), we sought to further explore the drugs-homicide connection with a sample of homicide incidents from Detroit, Michigan.

The dependent variable was conceptualized as a multinomial variable that differentiated drug-related into categories based on the role drugs played. Approximately 50% of the homicides in the current sample \( N = 175 \) involved no drug circumstances whatsoever. To some degree, this initial finding is surprising especially when one considers peripheral drug involvement to be an extremely loose definition of drug circumstances. One might reasonably expect a larger percentage of homicide incidents to involve drugs in a major metropolitan area with high levels of drug use and violence. However, such a finding does not necessarily refute the drugs-violence connection by any means. To the contrary, the relationship may very well exist at a macro-level; meaning, general patterns of illegal drug use or abuse may coexist with higher levels of violence. Yet in this instance, the relationship does not appear at the micro-or incident level to the degree expected.

An unanticipated finding from this research is the negligible role drug markets seem to play in predicting different types of homicide events. Drug markets were expected to be strongly associated with all types of drug homicides, and especially drug-motivated killings. Contexts can influence the characteristics of homicide through one of several channels. First, the context affords potentially likeminded individuals who are predisposed to drug use and violence the opportunity to meet in time and space. The notion of a drug market
itself suggests a location where individuals meet to agree on given business transactions. However, some have also noted a less direct effect of local context. Blumstein and colleagues (1999) noted a diffusion process where individuals who live in and frequent certain locations become aware that heavily armed individuals frequent a given area. However real or imaginary, this quasi-community characteristic develops a life of its own and subsequently encourages others to arm themselves with similar weaponry. In such a scenario a neighborhood could have a reputation as being frequented by heavily armed, violence-prone drug dealers. Likely aware of such a reputation, residents or other visitors may be more inclined to use violence in a preemptive manner.

The lack of a significant relationship is a bit perplexing. However, this finding can be interpreted as consistent with recent literature. The drugs-violence nexus is connected as much to the stability of drug markets as it is to the presence of a drug market itself (Fagan, Zimring, & Kim, 1998). Levels of systemic violence (see Goldstein, 1989) associated with drug markets has been found to be related to the stability of markets. In drug market terms, stability refers to a degree of central control of the drug distribution network that remains relatively unchallenged. Lower levels of violence would be associated with highly stable markets because interactants understand the rules of the game and fewer individuals are willing to exert violence to gain financial control of the local drug trade. Thus, violence is not seen as necessary to maintain control. It is interesting to note, similar arguments have also been advanced as it relates to drug-related gang violence (Curtis, 2003).

The only victim-level characteristic to reach the level of statistical significance was age. Contrary to the hypotheses, neither victim race nor gender was a significant discriminate as it related to drug-related homicide events. One possible explanation is due to the limited variation for these variables. African Americans comprise a substantial proportion of Detroit’s residents (approximately 80%) but an even larger proportion of homicide victims (approximately 90%). Similarly, a large percentage of homicide victims are men (approximately 80%). These features hold true across different types of homicide events. However, age of victim is an important predictor, especially of drug-motivated homicides. This finding supports the notion that violent drug crimes are a youthful pursuit.

What remains unclear is the exact role age plays in different types of drug-homicide events. On one hand, the relationship between victim age and peripheral drug events suggests a lifestyle effect; that is, young people are more likely to be involved in a lifestyle of partying, using drugs, and spending time in dangerous places accompanied by dangerous people. One author was reminded of a ride-along where police encountered a 15-year-old male youth gambling on a street corner in Detroit with five 20+ year-old men. All
were gambling and smoking marijuana; however, the 15-year-old was also carrying $1,500 in cash in one of Detroit’s most dangerous neighborhoods at 2:00 AM. Most alarming, the 15-year-old had only recently been released from the hospital after being shot in the neck in a similar situation 2 weeks earlier. This suggests a possible lifestyle effect where young males congregate, use drugs, and involve themselves in situations where violence is likely.

The relationship between victim age and drug-motivated homicide events can be interpreted as very different. Although the relationship also suggests a possible lifestyle effect, the substantive meaning applied would be quite different. In this scenario, youth could be an indicator of the business role in drug markets. For the small subset of homicide events that fit into the stereotypical drug-homicide conceptualization, the characteristics of victims confirm to the observations by Blumstein and colleagues (1999).

Another key finding also supports the lifestyle effect thesis. Victim drug lifestyle is a summary index reflecting victim’s association with known drug dealers and/or users, victim’s prior history of drug dealing and/or use, and victim’s history of a prior drug arrest. For the peripheral drug involvement and the drug-motivated models, prior drug involvement has the largest single effect. This supports other key findings, and the conclusion that it is not as much the neighborhood in which you live that increases odds of drug-related death but lifestyle choices as related to drug markets that increase risk.

It is also important to note the role firearms play in different drug-related homicides. Similar to several other independent variables, the presence of a firearm as the primary weapon of injury was predictive of peripheral and drug-motivated homicides. However, the odds associated with the drug-motivated homicides suggested the likelihood is increased nearly twice as much for drug-motivated events. Assuming drug-motivated homicides to be most similar to the popular idea of drug crime then this finding supports the argument that the use of firearms in drug transactions was partly responsible for the post-1980s rise in violent crime.

Finally, the data suggest important findings relative to the VOR. Homicide events involving friends were nearly 23 times more likely to be drug-motivated events compared to those involving strangers. This finding runs counter to what was hypothesized, namely, that events involving strangers would be more likely to involve drug circumstances. The nature of the VOR is an indicator of regularity and type of interaction between individuals. Relationships characterized by closer social distance (e.g., family and friends) often involve more frequent interactions. Williams and Flewelling (1988) argued close relations (e.g., family member, lover, and close friend) protect individuals from certain forms of instrumental violence (e.g., robbery) but, at the same time, expose individuals to greater risk for expressive forms of violence (e.g., violence stemming from jealousy, lovers’ triangles, etc.). This finding
does not hold up in the current research as it relates to drug-motivated events, presumably instrumental crimes. It is interesting to note, Decker (1996) and Varano and Cancino (2001) reported that drugs have diminished the protective features of VOR and exposed individuals to types and degrees of violence not previously thought to be common. We hypothesize that the diminished protective features of the friend VOR are linked to the nature of the drug culture and market in Detroit. It appears that individuals are more likely to enter into drug transactions with people whom they know reasonably well. Thus, the opportunity for drug-motivated events is reduced in the absence of stranger-to-stranger drug transactions.

FUTURE RESEARCH AND POLICY IMPLICATIONS

There is tremendous value in studying conceptually meaningful subtypes of homicide events. Williams and Flewelling (1988) persuasively argued that inconsistent findings in comparative homicide research are due, in large part, to the diverse nature of aggregate homicide data. Similar to Williams and Flewelling (1988), we support that researchers need to consider that homicide events are not universal types of lethal incidents. Instead, there are important differences between different subclasses of events. Although there is evidence researchers have heeded this recommendation, the drug-related typology remains rather vague. Findings supporting the conclusion that there are important differences between peripheral compared to drug-motivated homicides could have important implications for informing criminological theory and in structuring effective interventions.

Future research should also integrate offender-level data into such analyses. Because of problems of missing data where no offender is identified, offender-level attributes are excluded as explanatory variables. Approximately 30% of the cases used in the current research were open, that is, no offender was identified. Although features of the offender’s behavior as reflected by witness statements and other evidence are included in the dependent variable, individual offender attributes are excluded as independent variables because of the missing data. Thus, substantially larger sample sizes are likely necessary in future research that seeks to further disentangle the role of illicit drugs in lethal events.

It is also certainly important for researchers to consider possible situational or contextual effects. It is important to note our research suggests little effect of location within a drug market. Yet the measure included in this research is not the best measure of drug markets. Future research should consider the presence of a drug market and the stability of the drug market. The latter measure is seemingly difficult to measure. Moreover, it is also important to simultaneously consider the effects not only of drug markets but also of gun mar-
kets. It is plausible to anticipate the availability of firearms could affect the type and levels of violence.

The implications for policy, we argue, fall along the drug and gun nexus. Sherman and Rogan (1995) found a link between gun seizures and a decline in lethal violence in Kansas City. Similarly, McGarrell, Chermak, Weiss, and Wilson (2001) found a negative association between aggressive police patrol focusing on suspicious or known offenders and violence in Indianapolis. Our findings, with respect to drug-motivated homicides and homicides where drugs played a peripheral role, indicate that perhaps drug involvement facilitates the confluence of guns, offenders, and victims that result in lethal outcomes. Recent gun-focused strategies, if targeted particularly at those likely to be involved in street-level drug markets and carrying guns, should depress the level of homicides that are peripherally drug related. Drug-motivated homicides might also be reduced in a similar fashion. Both inferences require an assumption that weapon substitution would not occur.

The data we examined here, when combined with the results of prior research, help to illustrate how gun seizures may operate in depressing homicide levels. The homicide transactions we observed in this sample were often the genesis of fleeting disputes, which, but for the presence of firearms, would likely have not had lethal outcomes. These events are most amenable to programs focused on reducing the numbers of guns on the street through supply-side seizures or by working on the demand side and making the cost for carrying weapons too great when compared with the risk of being on the street without one.

APPENDIX

Examples of Drug-Related Homicide Types

No-Drug Involvement Example

The victim opened the door to the dwelling, an armed robbery was occurring of the pizza delivery person. The perp fired one shot (handgun) through the door and into the chest of the victim. Victim died in emergency room. Perp escaped on foot. Perp lived next door to the address of the homicide and was charged with felony murder, armed robbery, and felony firearm. (Coded as nondrug because motive was robbery and no evidence of drugs found in homicide files.)

Peripheral Involvement Example

The victim, offender, and others gathered in offender’s garage for a dogfight. Everyone was consuming alcohol and “having a good time.” Offender and one of the other attendees got into an altercation that turned physical. Offender got up and went inside house, and the guy with whom he was fighting ran outside. Offender returned to
garage and opened fire, striking victim. Somehow, the victim was transported by car (driven by another attendee?) to hospital, where he died. By most witness accounts, the offender was drunk and “got out of control.” (Coded as peripheral because offender was selling drugs while at party.)

**Drug-Motivated Example**

Two perpetrators met with the victim to purchase 1 pound of marijuana. Victim’s price was too high, so Perp 1 got angry and yelled at victim. Victim said, “Fuck you too!” and Perp 2 thought he was reaching for a gun. Perp 2 ran, pulled a gun, and fired at victim. Victim was hit once and then crashed his car. Victim died at scene from single gunshot wound. (Coded as drug motivated because the sale or use of drugs was the motivating factor in the event.)

**NOTES**

1. “Despite the fact that many of the communities in which interviews were conducted are Drug Abuse Warning Network (DAWN) and Drug Use Forecasting (DUF) sites, no respondents made mention of these data” (Lattimore et al., 1997, p. 75).

2. A case is closed when a likely offender has been identified; however this does not always mean the offender was arrested. For example, “exceptional clearances” are those where an offender has been identified but not arrested because he or she is dead, on the run, or otherwise not able to be arrested. Open cases generally refer to those instances where a likely offender has not been identified.

3. Oversampling homicide events from one precinct of Detroit raises concerns about the representativeness of the sample. To account for any potential bias, several aspects of the sample were compared to known characteristics of the entire population of homicides that occurred in Detroit between 1999 and 2002 that were downloaded from the Inter-University Consortium for Political and Social Research (ICPSR) housed at the University of Michigan. The comparisons are made in the sections that follow.

4. The method described above is far from perfect but provides a reasonable estimate of missing values. Pampel and Williams (2000) suggested including additional independent variables, especially if the case involved a co-occurring felony crime (e.g., burglary, robbery); however, this information was not available in the current data set. Regoeczi and Riedel (2003) also included clearance status (open or closed) in their maximum likelihood method that increased the proportion of estimated stranger homicides. Clearance status was not included in our imputation model because the information was also not available. To determine the accuracy of our imputation model, we compared the predicted values with the actual VOR values for the known cases. To do this, we constructed a cross-tab of known with predicted values. The imputation predicted correct victim-offender relationship 74% of the time. The highest level of agreement was for the friend and stranger categories (86% accuracy), followed by family (72% accuracy) and other acquaintance (52% accuracy).
5. Before proceeding with the analyses, OLS regression diagnostic procedures were carried out to investigate the presence of multicollinearity. The variance inflation (VIF) statistics yielded no apparent problems with multicollinearity.

6. The Nagelkerke $R^2$ is a modified version of the Cox and Snell pseudo $R^2$. The Cox and Snell can be difficult to interpret because it often cannot reach 1.0. Nagelkerke's $R^2$ divides Cox and Snell's $R^2$ by its maximum to achieve a measure that ranges from 0 to 1.

REFERENCES


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