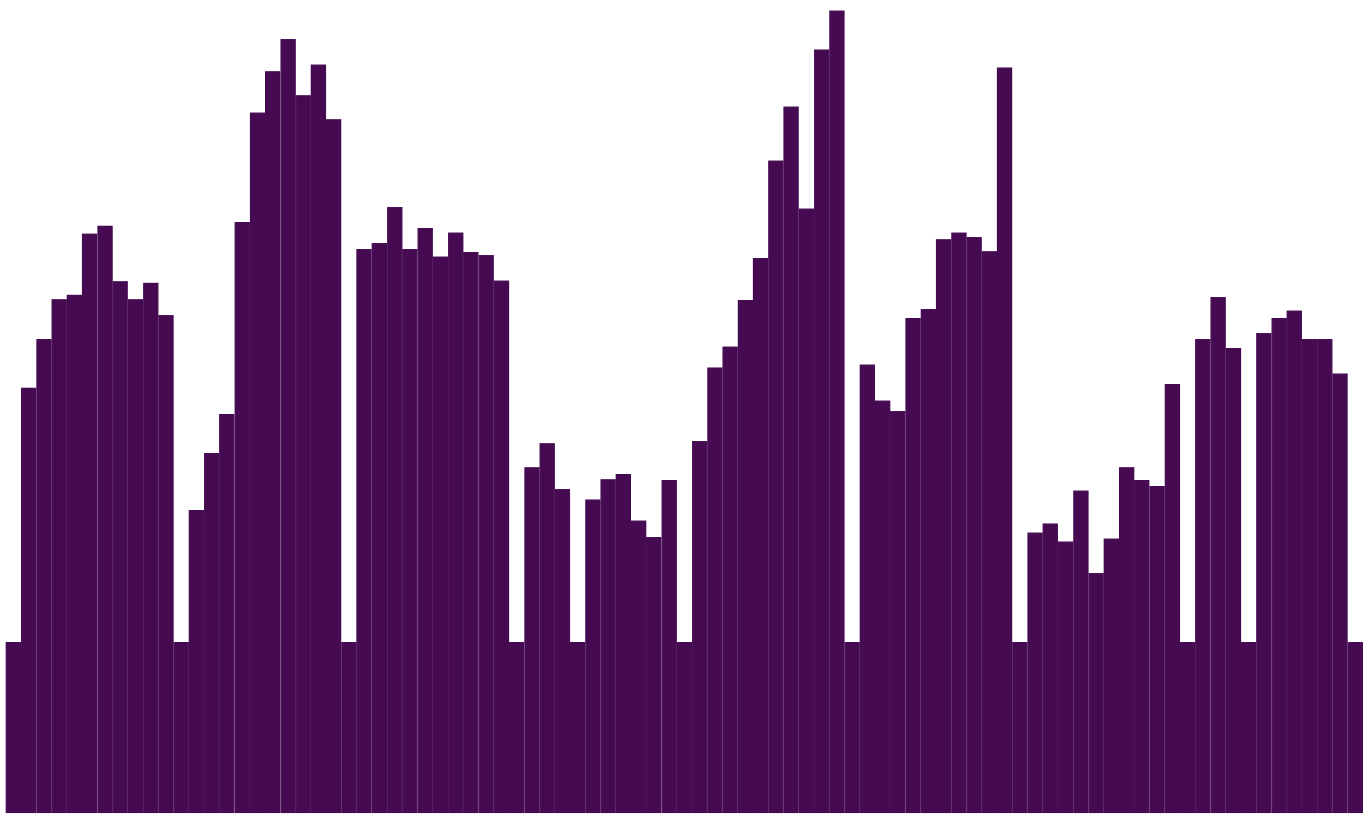




National Institute of Justice

R e s e a r c h R e p o r t

Homicide in Eight U.S. Cities: Trends, Context, and Policy Implications



AN INTRAMURAL PROJECT OF THE NATIONAL INSTITUTE OF JUSTICE

U.S. Department of Justice
Office of Justice Programs
810 Seventh Street N.W.
Washington, DC 20531

Janet Reno
Attorney General
U.S. Department of Justice

Raymond C. Fisher
Associate Attorney General

Laurie Robinson
Assistant Attorney General

Jeremy Travis
Director, National Institute of Justice

Justice Information Center
World Wide Web Site
<http://www.ncjrs.org>

National Institute of Justice
World Wide Web Site
<http://www.ojp.usdoj.gov/mij/>

Homicide in Eight U.S. Cities: Trends, Context, and Policy Implications

An Intramural Research Project

Pamela K. Lattimore, Ph.D.
James Trudeau, Ph.D.
K. Jack Riley, Ph.D.
Jordan Leiter, Ph.D.
Steven Edwards, Ph.D.

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This Research Report discusses an NIJ intramural research project. Opinions expressed are those of the authors and not necessarily those of the U.S. Department of Justice. Comments and questions should be addressed to Pamela K. Lattimore, Director, Criminal Justice and Criminal Behavior Division, Office of Research and Evaluation, NIJ, 810 Seventh Street N.W., Room 7333, Washington, DC 20531; or at pam@ojp.usdoj.gov.

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Introduction

In recent years, sharp declines in homicides have been recorded in several major U.S. cities. New York City, for example, experienced a 31-percent decline in its homicide rate between 1990 and 1994.¹ Although attention has focused on those cities that have recently witnessed dramatic declines in homicide, the downward trend is by no means universal. Indeed, as can be seen in figure 1–1, between 1990 and 1994, the total number of homicides in the United States reflected little change (23,440 homicides recorded in 1990 and 23,310 in 1994) and greatly exceeded the 18,980 recorded in 1985.²

In fall 1995, the National Institute of Justice initiated a series of studies to examine violence in the United States, with a particular focus on violence in cities. The initial efforts were focused on homicide because it represents the most serious level of violence and is the most precisely measured offense in the Nation's crime-reporting systems. During the study, it was necessary to consider "homicide and other serious violent crime" because a variety of factors—some of which were the focus of the project—may influence whether a crime is classified as a serious assault or a murder. The primary focus, however, was on homicide.

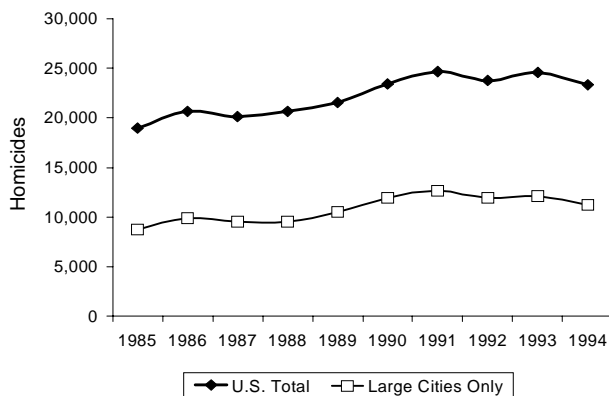
Figure 1–1 also shows homicides in "large cities" over the 1985–1994 period, where "large city" has been defined as one with a population of 200,000 or more during at least one year of the study. The focus was on what happens within a city boundary, not in the larger surrounding geographic region (e.g., county or Standard Metropolitan Statistical Area [SMSA]).

There were 78 U.S. cities that had populations greater than 200,000 during the period of interest, but Uniform Crime Reports (UCR) data were not available for one of those cities (Wichita, Kansas). The remaining 77 cities, which had approximately 20 percent of the total U.S. population, accounted for approximately half of the homicides recorded annually in the United States over this period. Further, in 43 of these cities, the number of homicides in 1994 exceeded the number in 1990; in 41 of these cities, the per capita homicide rate in 1994 exceeded the 1990 rate.³ Thus, the focus on national trends and on trends in major cities such as New York that have witnessed recent declines may mask a more complex picture that has substantial variation.

Figure 1–2 places the recent homicide trend in the United States in historical context. Since 1960, the homicide rate per 100,000 inhabitants has varied between a low of about 4.5 in the 1960s to a high of about 10 around 1980.⁴ The years 1984 and 1985 provide the most recent historical low, with an estimated value of 7.9. This study used 1985 as the start point for its 10-year framework.

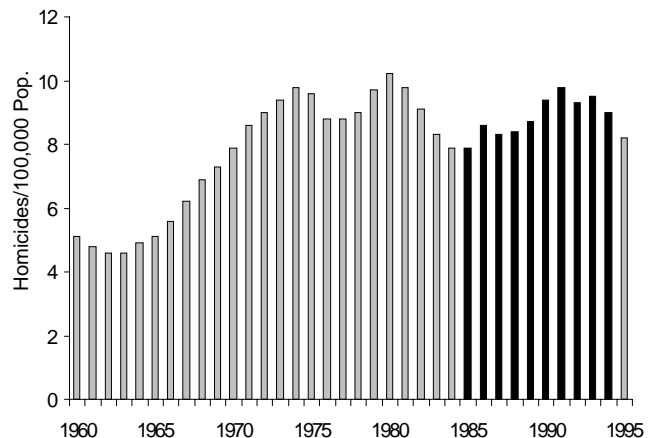
Policymakers, media representatives, and scholars have attributed the recent declines in homicide to a variety of factors, including demographic and population changes that may have reduced the number of violent offenders on the streets, nuisance and violence abatement programs that may have deterred and incapacitated violent offenders, greater police visibility through wider implementation of problem-oriented or community-oriented policing, reductions in drug

Figure 1–1. Homicides in the United States, 1985–1994



Note: Large cities are defined as those with populations of more than 200,000.

Figure 1–2. United States' Homicide Rate, 1960–1995



Note: Black bars represent study years (1985–1994).

use or stabilization of drug markets, and improvements in social or economic conditions. Generally, these attributions of program effectiveness—e.g., changes in policing practices—have been made with respect to the trends in specific cities that have witnessed *declines* in murders. The difficulty with this approach is that communities that witnessed *increases* in murders also might have experienced similar changes in programs or policies. To determine whether a program or policy change is effective, one must look at the programs or policies in cities that have experienced various trends in homicides over the period of interest.

In approaching this project, the researchers were interested in focusing on homicide as a local phenomenon. The reason for this is twofold. First, many of the factors chosen for study vary across locations and over time—not necessarily in concert with national trends. Second, the policies and programs to address violent crime are primarily the responsibility of local governments (albeit, perhaps, with financial infusions from the Federal Government or State legislatures). Thus, many of the causes and most of the solutions to violent crime were assumed to have been operating at the local or city level.

Resolving the conflicting components of the homicide picture has obvious policy implications. At the tactical level, the allocation of violence prevention resources, for example, depends to some extent on the

understanding of what works to prevent violence. Similarly, at the strategic level, antiviolence policies that may be considered or adopted in light of predicted changes in demographic trends may have to be reconsidered as the understanding of homicide changes. Moreover, what works to combat violence in one community may not work in another. In short, policymakers may benefit substantially by increasing their understanding of homicide.

This report describes the rationale for and approach to a study of homicide in eight U.S. cities—Atlanta, Detroit, Indianapolis, Miami, New Orleans, Richmond, Tampa, and Washington, D.C.—that experienced different trends in homicide from 1985 through 1994. Throughout the planning and operationalization of the project, emphasis was placed on investigating policy-relevant avenues of inquiry and providing findings in a policy-relevant time horizon. The recent changes in violent crime patterns, particularly in New York City, led to increased emphasis on reducing violent crime and homicide elsewhere. The researchers hoped to inform this debate by providing research results as quickly as was feasible. At the same time, the project team wanted to structure the project in a way that would anticipate and encourage additional research on homicide. This study was undertaken to attempt to offer insights on the diverse homicide trends in cities across the country and help organize and prioritize research on the subject.

Five basic decisions guided the development of the project:

- ◆ To focus on communities with strong changes in homicide trends in the belief that these changes in homicide trends would be substantial and, thus, more observable.
- ◆ To analyze a limited number of cities to establish deeper understanding of changes in signal communities rather than a broader understanding of national trends.
- ◆ To study factors that are closely linked with serious violence and homicide.
- ◆ To focus on recent history (1985–1994) because this period is most relevant to policymakers.
- ◆ To address both perceptions of and actual changes in factors in these communities.

The resulting study researches homicide trends between 1985 and 1994 in eight cities. It begins with a focus on the community, using homicide as the “dependent variable” in the project’s inquiry into context, policy, and homicide.

Key findings of the project include evidence:

- (1) Reinforcing the local nature of homicide (“all crime is local”).
- (2) Supporting a link between cocaine (primarily “crack”) use and homicide.
- (3) Guns as the instrument of homicide increased over time in all eight cities—even those that showed declines in total numbers of homicides.
- (4) Supporting the perceived effectiveness of problem-oriented policing, public housing policing, multijurisdictional task forces, and programs and services for domestic violence victims.
- (5) Relating inmate flows into and out of State prisons with the level of homicide.

The results also suggest that:

- (1) Community-oriented policing activities and programs were too recently implemented in the eight cities to substantiate their effectiveness.
- (2) Drugs other than cocaine (“crack”) were not associated with homicide trends in any discernible way.
- (3) Drug market structure appeared less associated with the level of violence than initial assumptions or findings had suggested.
- (4) Gangs were not viewed as a significant cause of violence in the eight cities, except to the extent that they were involved in drug dealing, perhaps because none of the cities is particularly noted for high levels of organized gangs.
- (5) Further investigation is needed regarding the relationship between the availability and lethality of guns, the quantity and quality of emergency medical services, and homicides.
- (6) While cross-city analyses of economic factors produced weak and mixed findings, within-city analyses using census tract data may be more promising.

Chapter 2 describes the project design and provides additional information on the hypotheses investigated, interview development and testing, and site selection. Chapter 3 presents an analysis of the homicide trends in the selected cities. The next three chapters describe key findings in each of the substantive domain areas—environmental or macro, situational or micro, and system response. The chapter entitled “Conclusions and Future Work” includes a summary of key policy findings and a discussion of plans for future research.

Notes

1. “Homicide” and “murder” are used interchangeably throughout this report to refer to murder and nonnegligent homicide as it is classified by the Federal Bureau of Investigation’s Uniform Crime Reports.
2. The period 1985 to 1994 is used throughout this report, although data are now available for 1995.

According to the Uniform Crime Reports (*Crime in the United States 1995*, Washington, D.C.: U.S. Department of Justice, 1996, p. 13), murder and non-negligent homicide dropped 7.4 percent in the United States between 1994 and 1995 (from 23,310 to 21,597). Numbers reported here are the estimated numbers from the UCR. The U.S. data are from the *Sourcebook of Criminal Justice Statistics—1994*, K. Maguire and A.L. Pastore, eds., Washington D.C.: U.S. Department of Justice, 1995; and *Crime in the United States 1994*, Washington, D.C.: U.S. Department of Justice, 1995. City-level data were provided by the FBI, Uniform Crime Reporting Center; a city

was included in the dataset if the population was 200,000 or greater during any year between 1985 and 1994. Homicide data were missing for several cities for some years. The number(s) of cities for which data were missing were one in 1985, 1986, and 1987; eight in 1988; three in 1989; and two in 1990.

3. Data were missing for Minneapolis for 1990.

4. Homicide rate estimates per 100,000 for 1960 through 1994 are from the summary of UCR estimates provided by the *Sourcebook of Criminal Justice Statistics—1994*, 1995, p. 324; the estimated rate for 1995 is from *Crime in the United States 1995*, p. 13.

Project Design

The project centered on gathering information on homicide, violence, and associated factors from key policymakers, law enforcement and criminal justice system representatives, and community leaders in a limited number of cities. The project was intended to be of reasonable scope with respect to time, personnel, and other resources. The main focus was on policy-related issues, with some attention paid to identifying the nature and extent of contextual factors associated with crime and violence.

This broad framework led to three questions: “What would we ask?” “To which cities would we go?” “To whom would we talk?” Answers to these questions are in the remainder of this chapter. Specifically, this chapter addresses (1) research hypotheses, (2) site selection, (3) interview development, and (4) project implementation.

Research Hypotheses

Several criteria were used for establishing the research hypotheses. Generally, priority was given to issues where a strong, *direct* link between the factor and the homicide rate could be anticipated. Specifically, an attempt was made to narrow the hypotheses to those where anticipated effects could be described as “first order.” (These were also described as hypotheses in which the “chain” linking the factor and homicide could be envisioned as short.) To accommodate the 10-year period under study, the project also sought to investigate issues on which communities were likely to have acted over the past decade.

To facilitate project design, hypotheses were grouped into three major categories or domains—two contextual and one response. The contextual domains were environmental or macro and situational or micro. The response domain included only the criminal justice system (law enforcement, prosecution, courts, and corrections). Service providers were included in the macro domain. The underlying structural hypotheses are summarized in table 2–1.

Macro domain. The macro domain included the environmental and social context within which homicide and violence occur and the set of societal forces that, in the aggregate, may stem from individuals’ behavior but are typically beyond any individual’s control. Examples of macro-level issues included demographic trends, employment rates, and educational attainment of citizens. Macro-level factors also were defined to include programs, services, and policies that are not the responsibility of criminal justice system agencies. Examples from this category included emergency medical service (EMS) programs, educational services, community groups and their responses to violence, and domestic violence programs. This domain proved the most difficult to narrow and, as envisioned, to satisfactorily research. Specific hypotheses in the macro domain are listed below:

- (1) Positive/negative changes in economic conditions result in decreases/increases in violence and homicide.
- (2) Increases/decreases in the numbers (and proportions) of those in violence-prone demographic groups result in increases/decreases in violence and homicide.

Table 2–1. Structural Hypotheses Relating to Changes in City-Level Homicide Rates

Structural Domain		
Environmental or Macro-Level Factors	Situational or Micro-Level Factors	Response or Criminal Justice System
Economic conditions	Drug market stability	Policing practices
Demographic changes	Extent and type of drug use	Task forces (interagency, multijurisdictional)
System responses or resources (e.g., emergency medical services, domestic violence shelters)	Availability and lethality of handguns/other weapons	Actual and perceived likelihood or severity of punishment
Prevention programs	Gangs and gang activity	Incapacitation of a large number of young, crime-prone males

- (3) Improvements in system responses (e.g., EMS, domestic violence victim shelters) will result in decreases in homicide.
- (4) Increases in violence prevention programs (e.g., mediation) will result in decreases in violence and homicide.

Micro domain. The micro domain included the situational factors that relate directly to homicide and, typically, an individual’s behavior. Thus, this domain of analysis was concerned with homicide in its situational context and can be best described as “guns, gangs, and drugs.” Specific hypotheses in the micro-level domain, listed below, related to the availability of drugs and guns, the market structures associated with drugs and guns, and the extent of gang activity:

- (1) Increases/decreases in the stability of drug markets will be associated with increases/decreases in violence and homicide.
- (2) The extent of drug use and type of drugs prevalent in local markets will be related to the level of violence.
- (3) Increases in the lethality and availability of guns will be associated with increases in violence and homicide.
- (4) Gang activity—in connection with drug and gun markets or for other purposes—will be associated with violence and homicide.

In particular, the researchers were interested in whether certain drugs are more strongly associated with violence (e.g., crack cocaine) than others (e.g., marijuana). With respect to investigations of gangs, it is acknowledged—as will be seen in the next section—that none of the sites is known as a “gang city.”

The response domain. The response or criminal justice system domain encompassed law enforcement, prosecution, courts, and corrections. This area of inquiry was established to explore the impact that criminal justice policies and practices might have on homicide trends. Thus, for example, one hypothesis to be tested in the criminal justice system area was that changes in police deployment practices have reduced the level of violence and, therefore, the number of homicides. In this domain, questions were designed to examine whether:

- (1) More proactive and/or community-oriented policing is associated with a decrease in serious violence and homicide.
- (2) Interagency, multijurisdictional activities against violence, drugs, and/or gangs are associated with a decrease in serious violence and homicide.
- (3) Actual and perceived increases/decreases in the likelihood or severity of punishment are associated with decreases/increases in violence and homicide.

- (4) Increases/decreases in the incarceration of large numbers of young, crime-prone males are associated with decreases/increases in violence and homicide.

The project team developed an approach for identifying cities that would be the subjects of investigation. The site selection process is described in the section that follows. The conclusion of this section details the development of a series of questions to generate information pertinent to the hypotheses, the identification of individuals who would be targeted for interview, and the field investigation.

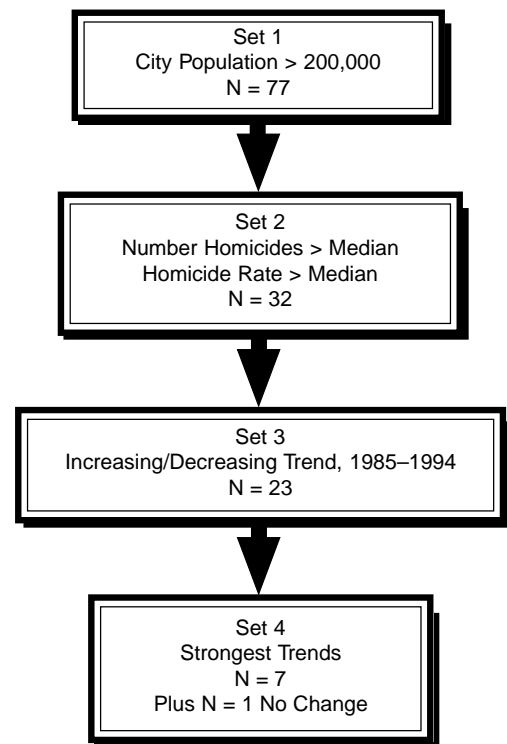
Site Selection

A variety of options were considered to select the cities that would be the focus of the inquiries. Available resources were sufficient to visit 8 to 10 cities. The goal was to investigate the relationships between homicide trends and qualitative factors such as policing effectiveness that would be poorly measured at best. Therefore, efforts were focused on those cities where homicide trends were the “strongest” over the period of interest. Thus, no deliberate attempt was made to identify cities that could be construed, either individually or as a set, as representative of the Nation as a whole. Additionally, potential explanatory factors such as policing policies, urban migration patterns, and demographic characteristics were explicitly avoided in the selection process. The implication of this decision was that issues of interest—e.g., gang activity, urban migration patterns, or demographic characteristics—might not be represented in the final set of cities. Further, this process did not ensure heterogeneity with respect to other factors of interest such as geographic region.

In general, cities were selected for indepth study based on their population and the strength of their homicide rate trends over the past decade (1985–1994). This period was chosen because 1985 represented the most recent upturn in homicide. Figure 2–1 shows the selection process. The research team chose to look only at cities with populations of more than 200,000 during at least one year of the study period. As previously noted, 1 of the 78 cities with populations over 200,000 was dropped because of missing

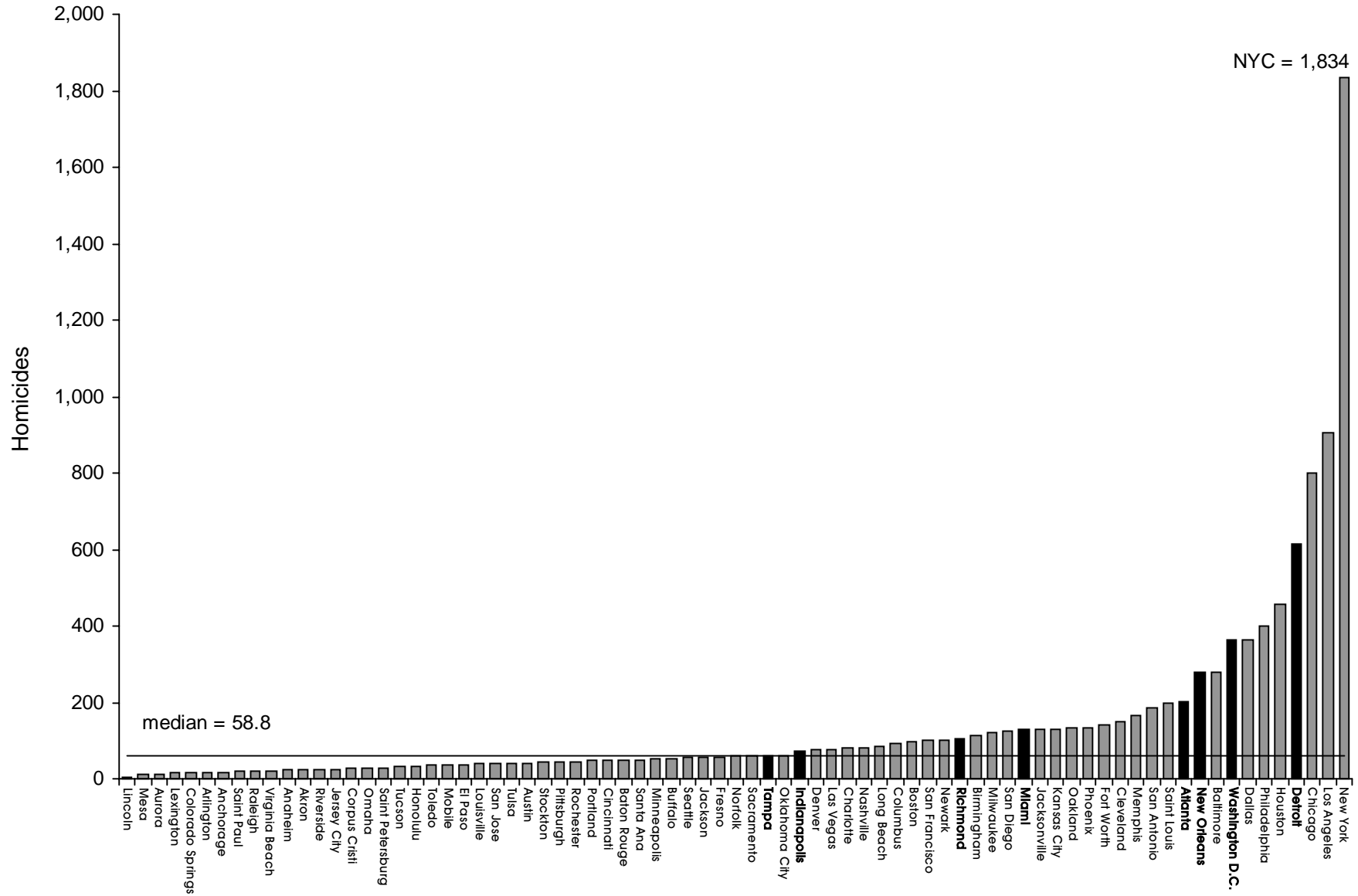
homicide data; thus, the initial city set contained 77 cities. Population was used as a criterion because as few as one or two additional homicides in small cities can greatly change homicide rates. Population was based on those residing within the city boundary, not the Standard Metropolitan Statistical Area (SMSA).

Figure 2–1. Site Selection Process



The 77 cities selected exhibit considerable range in the number and rate of homicides, as can be seen in figures 2–2 and 2–3. The average annual *number* of homicides over the 1985–1994 period ranged from a low of 4.6 (Lincoln, Nebraska) to a high of 1,834 (New York, New York), while the average homicide *rate* per 100,000 population ranged from a low of 2.4 (Lincoln, Nebraska) to a high of 60.4 (Washington, D.C.). The mean number of homicides over all 77 cities for this period was 140.7; the median number of homicides was 58.8. The mean homicide rate over all 77 cities was 19.6 per 100,000 population; the median rate was 15.8—roughly twice the national homicide rate over this period, which was 7.9 per 100,000 in 1985, 9.8 in 1991, and 9.0 in 1994 (see figure 1–2).

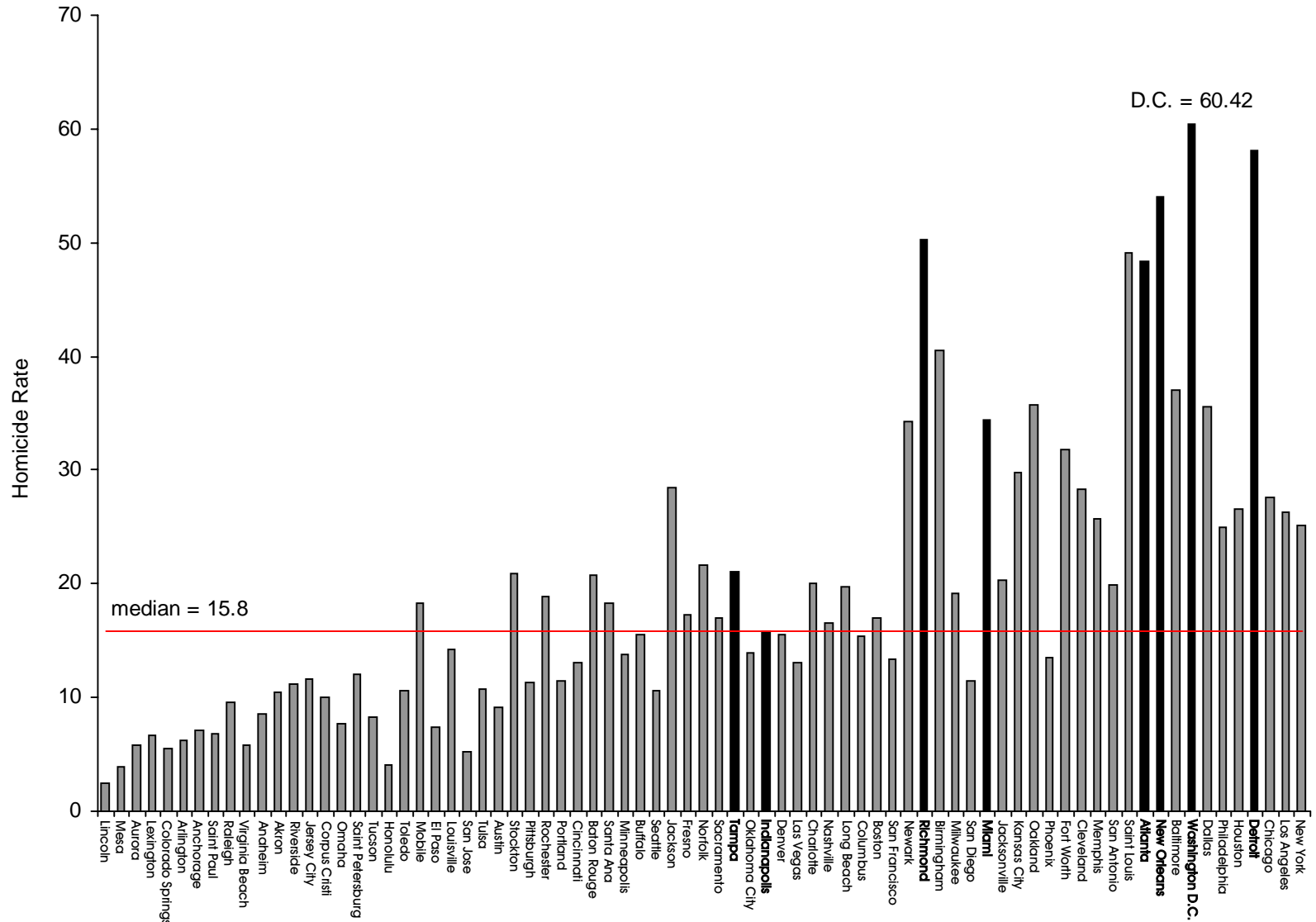
Figure 2–2. Mean Annual Homicide Counts for 77 Largest U.S. Cities,* 1985–1994



*Large cities are defined as those with populations of more than 200,000.

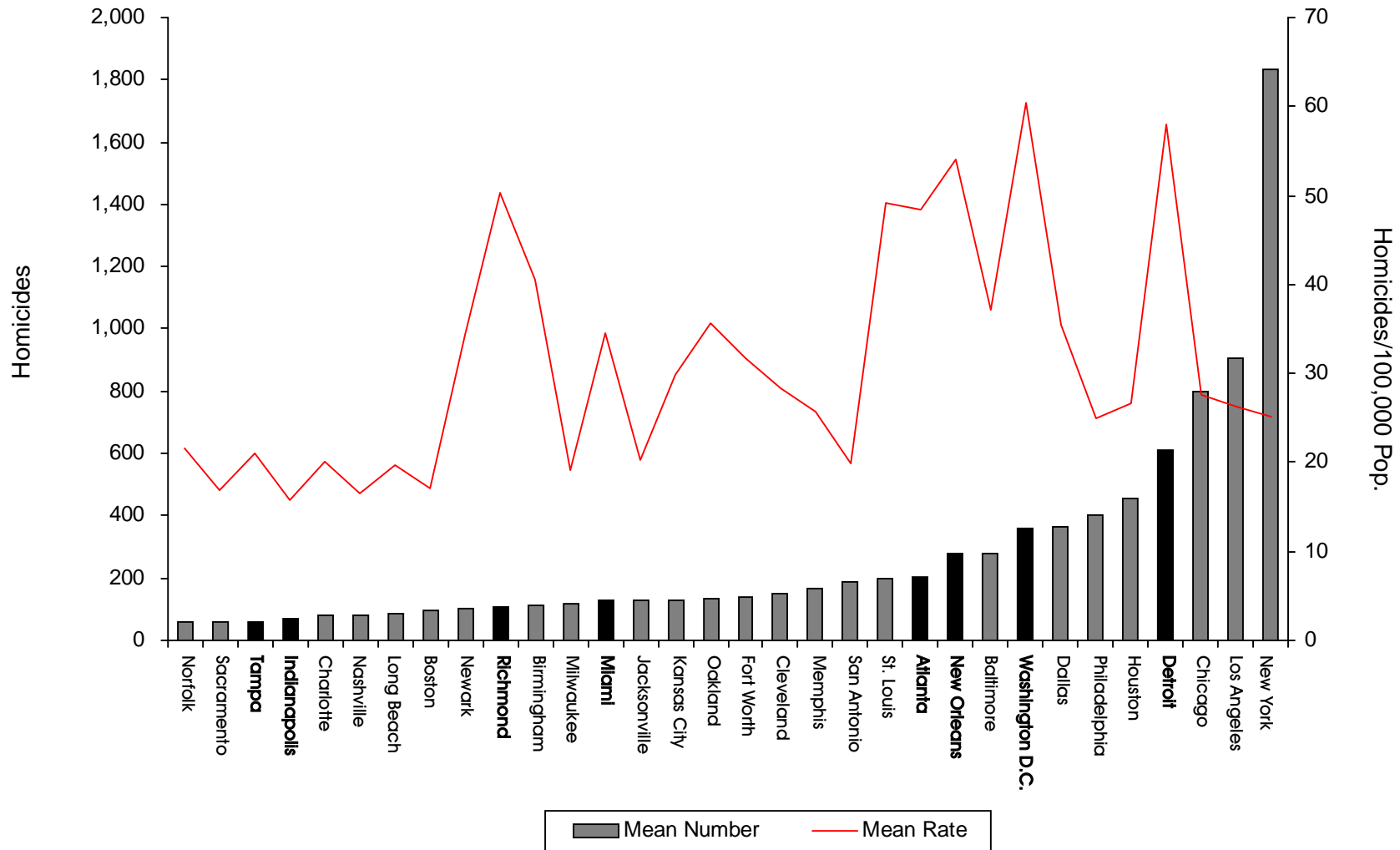
Note: The mean annual homicide count for each city is listed in Appendix 2–A. Black bars denote study cities.

Figure 2-3. Mean Annual Homicide Rates for 77 Largest U.S. Cities, 1985-1994



Note: The mean annual homicide rate for each city is listed in Appendix 2-A. Black bars denote study cities.

Figure 2–4. Mean Annual Homicide Counts and Rates for 32 U.S. Cities, 1985–1994



Note: The mean annual homicide count and rate for each city is listed in Appendix 2–A. Black bars denote study cities.

Of the 77 cities selected, attention was focused on those with large homicide problems, i.e., annual numbers of homicides that averaged above the group median (58.8) and annual homicide rates that averaged above the group median (15.8 per 100,000 population). Thus, cities that represented a substantial portion of the national homicide picture were targeted, while those with low trends (and a resultant susceptibility to the effect of atypical events) were culled out.

Thirty-two cities had mean annual homicide counts and mean annual homicide rates that averaged above the medians for this set of cities and, thus, met the selection criteria. The homicide counts and rates for these cities are shown in figure 2–4.

In step 2 of the selection process, researchers identified the homicide trend (if any) in each of the cities and examined its strength. Cities that had clear trends or patterns in their annual homicide rates were sought. Rates rather than counts were reviewed at this point to control for population size. This purposive sampling was done in the belief that the underlying causal factors that could partially explain the trends would be more visible in communities where the trends were strongest. However, because of the sampling strategy, results from the investigations are not generalizable, for example, to national trends.

Five categories of trends were considered:

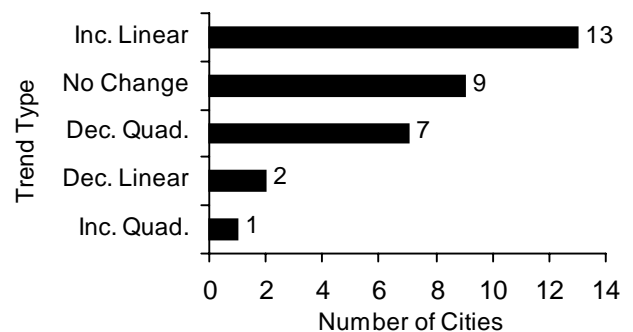
- ◆ Decreasing linear.
- ◆ Decreasing quadratic.
- ◆ Increasing linear.
- ◆ Increasing quadratic.
- ◆ No change.

Linear trends are those in which, over the 10 years under consideration, homicide rates generally moved in a straight or downward direction. Quadratic trends have values that “change direction” once over the relevant study period. Specifically, decreasing quadratic trends are those where several years of increases in homicide rates are followed by several years of decreases. Cities with decreasing quadratic trends have received the most attention recently largely because the peaks, or points of

change in direction, have occurred in recent years and offer stark contrast to rates of the late 1980s. Increasing quadratic trends are the opposite—homicide rates decrease at first and then increase.

Regression analysis was used to fit each of the 32 cities’ 10-year homicide rate data to linear and quadratic curves. Goodness-of-fit statistics were used to decide which type of curve best explained each city’s 10-year trend. A city was placed into the decreasing linear category, for example, if the 10 years of data fit a downward sloping line better than a quadratic decreasing or increasing curve. If none of the four curves provided sufficient fit to the data, the city was placed in the no-change category.¹ Interestingly, in contrast to the national trend in homicide rates (which is decreasing quadratic as shown in figure 1–2) and recent media focus, 14 of the 32 cities that met the initial screens had increasing homicide trends (13 linear, 1 quadratic) and 9 had decreasing trends (7 quadratic, 2 linear). The remaining nine cities showed no clear homicide trends for this time period. Figure 2–5 summarizes the trend analyses for the 32 cities. The results of the regression analyses for the 32 cities are given in table 2–2. Both linear and quadratic

Figure 2–5. Ten-Year Homicide Rate Trends in 32 U.S. Cities, 1985–1994



models for each city are shown. Cities are listed within the category that provided the best fit to their data in order of the strength of the trend. (No-change cities are listed in alphabetical order.)² Within each category and where possible, the two cities with the strongest trends were selected. Only one city’s homicide trend was characterized as increasing quadratic and, thus, a single city appears in this category.

Table 2–2. Linear Regression Model Results for 32 Cities

City	Model	R ²	df	F-Statistic	β_0	β_1	β_2	Homicide Number (Mean)	Homicide Rate (Mean)
Decreasing Linear									
Tampa	linear	0.510	7	7.29*	95.4451	-0.8294			
Tampa	quad	0.534	6	3.43	670.633	-13.706	0.0720	60.78	21.07
Detroit	linear	0.424	8	5.88*	08.104	-0.5591			
Detroit	quad	0.618	7	5.67*	-1090.1	26.2447	-0.1497	613.4	58.07
Decreasing Quadratic									
Washington, D.C.	linear	0.728	8	21.39*	-490.65	6.1571			
Washington, D.C.	quad	0.944	7	59.06*	-11108	243.656	-1.3268	361.9	60.42
Atlanta	linear	0.221	8	2.27	-52.949	1.1325			
Atlanta	quad	0.841	7	18.56*	-6055.7	135.411	-0.7502	202.9	48.41
Dallas	linear	0.005	8	0.04	22.4082	0.1470			
Dallas	quad	0.541	7	4.13	-4963.6	111.681	-0.6231	363.4	35.56
Jacksonville	linear	0.013	7	0.09	34.1304	-0.1545			
Jacksonville	quad	0.750	6	9.02*	-3733.7	84.1953	-0.4716	130.9	20.27
New York	linear	0.186	8	1.83	-21.071	0.5155			
New York	quad	0.842	7	18.60*	-3085.0	69.0528	-0.3829	1834	25.07
Philadelphia	linear	0.524	8	8.82*	-73.958	1.1047			
Philadelphia	quad	0.817	7	15.61*	-2682.6	59.4581	-0.3260	401.4	24.91
Cleveland	linear	0.406	8	5.46*	-50.335	0.8786			
Cleveland	quad	0.619	7	5.69*	-2066.8	45.9856	-0.2520	148.0	28.30
Increasing Linear									
New Orleans	linear	0.911	8	81.78*	-504.43	6.2402			
New Orleans	quad	0.916	7	37.99*	920.890	-25.643	0.1781	278.0	54.07
Saint Louis	linear	0.675	8	16.61*	-275.30	3.6248			
Saint Louis	quad	0.746	7	10.28*	3444.45	-79.584	0.4649	199.8	49.12
Richmond	linear	0.775	8	27.55*	-273.08	3.6131			
Richmond	quad	0.825	7	16.45*	2617.80	-61.054	0.3613	106.7	50.29
Birmingham	linear	0.728	8	21.37*	-177.93	2.4412			
Birmingham	quad	0.728	7	9.37*	-360.14	6.5172	-0.0228	111.4	40.56
Baltimore	linear	0.885	8	61.39*	-166.89	2.2790			
Baltimore	quad	0.885	7	27.05*	-376.12	6.9593	-0.0261	279.3	37.08
Milwaukee	linear	0.750	8	24.04	-124.42	1.6042			
Milwaukee	quad	0.824	7	16.38*	-1713.9	37.1589	-0.1986	119.6	19.16
Norfolk	linear	0.594	8	11.71*	-117.27	1.5521			
Norfolk	quad	0.692	7	7.86*	2107.8	46.0783	-0.2487	58.8	21.64

Table 2–2. Linear Regression Model Results for 32 Cities (continued)

City	Model	R ²	df	F-Statistic	β_0	β_1	β_2	Homicide Number (Mean)	Homicide Rate (Mean)
Chicago	linear	0.764	8	25.97*	-95.490	1.3760			
Chicago	quad	0.764	7	11.36*	103.62	1.5579	-0.0010	798.7	27.66
Oakland	linear	0.643	8	14.43*	-87.001	1.3707			
Oakland	quad	0.724	7	9.19*	-1622.8	35.7254	-0.1919	133.3	35.68
Kansas City	linear	0.687	8	17.59*	-74.944	1.1700			
Kansas City	quad	0.783	7	12.60*	-1452.5	31.9845	-0.1721	131.3	29.77
Charlotte	linear	0.360	8	4.49	-83.521	1.1569			
Charlotte	quad	0.410	7	2.44	-1456.1	31.8598	-0.1715	79.5	20.02
Long Beach	linear	0.451	8	6.56*	-74.413	1.0513			
Long Beach	quad	0.487	7	3.32	-1016.8	22.1314	-0.1178	84.0	19.68
Memphis	linear	0.448	8	6.49*	-60.461	0.9625			
Memphis	quad	0.548	7	4.24	-1500.6	33.1774	-0.1800	163.8	25.69
Increasing Quadratic									
Indianapolis	linear	0.510	8	8.34	-102.19	1.3186			
Indianapolis	quad	0.726	7	9.26*	2606.31	-59.269	0.3385	71.6	15.82
No Change (in alphabetical order)									
Boston	linear	0.005	8	0.04	9.7967	0.0806			
Boston	quad	0.151	7	0.62	-1399.2	31.5989	-0.1761	97.2	17.01
Fort Worth	linear	0.029	8	80.24	68.5617	-0.4108			
Fort Worth	quad	0.035	7	0.13	641.868	-13.235	0.0716	141.8	31.79
Houston	linear	0.043	8	0.36	-7.2653	0.3783			
Houston	quad	0.297	7	1.48	-2914.3	65.4060	-0.3633	454.9	26.59
Los Angeles	linear	0.263	8	2.86	-19.117	0.5074			
Los Angeles	quad	0.299	7	1.49	-608.78	13.6978	-0.0737	906.0	26.30
Miami	linear	0.168	7	1.41	549.107	-0.2587			
Miami	quad	0.168	7	1.42	292.107	0	-0.00007	130.3	34.49
Nashville	linear	0.178	8	1.73	46.268	-0.3320			
Nashville	quad	0.202	7	0.89	431.082	-8.9400	0.0481	82.6	16.56
Newark	linear	0.002	8	0.02	28.6789	0.0626			
Newark	quad	0.017	7	0.06	542.665	-11.435	0.0642	101.2	34.28
Sacramento	linear	0.019	8	0.16	36.0768	-0.2140			
Sacramento	quad	0.026	7	0.09	430.610	-9.0394	0.0493	60.0	16.93
San Antonio	linear	0.184	8	1.80	-10.527	0.3404			
San Antonio	quad	0.201	7	0.88	318.923	-7.0292	0.0412	187.6	19.94

*Significant at p<0.05.

Finally, given time and resource constraints and an interest in exploring extreme changes in homicide trends, only one no-change city was selected. The eight cities selected are shown in table 2–3; the observed homicide rate trends for these cities are shown in figure 2–6.

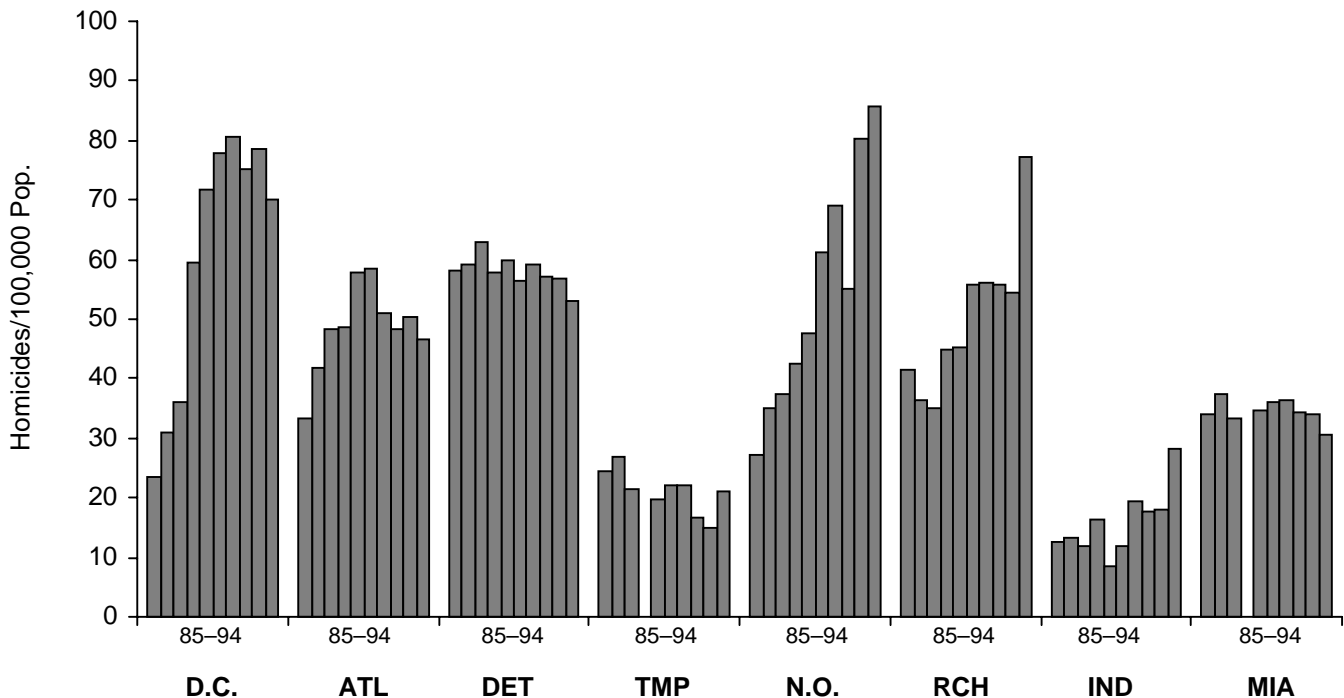
Figures 2–7 through 2–10 show the eight cities’ observed homicide rates and expected homicide rates as predicted by the best-fit regression lines. The regression equations appear to adequately capture the trend information contained in the city-level homicide rate data.

All of the selected cities are in the Eastern United States, and most are in the South. Additionally, only Detroit had a population greater than 1 million, with an average population of 1,055,606 over the 10-year study period. Richmond had the smallest population, with a 10-year average of 213,634. The average annual populations for the eight cities are shown in figure 2–11.

1985–1994 Homicide Rate Trends (number of eligible cities)	Selected Cities	
	City 1	City 2
Decreasing linear (2)	Detroit	Tampa
Decreasing quadratic (7)	Washington, D.C.	Atlanta
Increasing linear (13)	New Orleans	Richmond*
Increasing quadratic (1)	Indianapolis	**
No change (9)	Miami	***

* St. Louis was selected originally but was substituted with Richmond (third on the list; see table 2–2) because St. Louis is being studied extensively by other investigators, including Margaret Zahn and Richard Rosenfeld.
 ** Only one city exhibited this pattern.
 *** Only one city with this pattern was selected.

Figure 2–6. Annual Homicide Rates for Selected Cities, 1985–1994



Note: The study cities are abbreviated as follows: Washington, D.C. = D.C., Atlanta = ATL, Detroit = DET, Tampa = TMP, New Orleans = N.O., Richmond = RCH, Indianapolis = IND, Miami = MIA.

Figures 2-7 through 2-10. Observed and Expected Homicide Rate Trends for Selected Cities, 1985-1994

Figure 2-7. Decreasing Quadratic Homicide Trend in Atlanta and Washington, D.C.

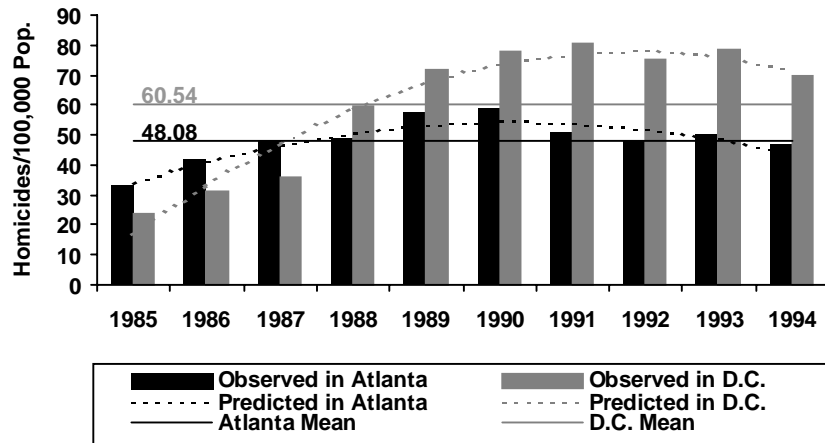


Figure 2-8. Decreasing Linear Homicide Trend in Detroit and Tampa

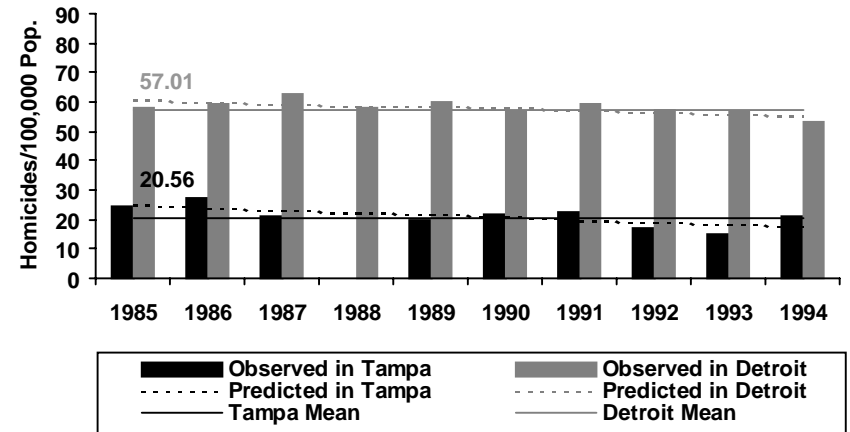


Figure 2-9. Increasing Linear Homicide Trend in New Orleans and Richmond

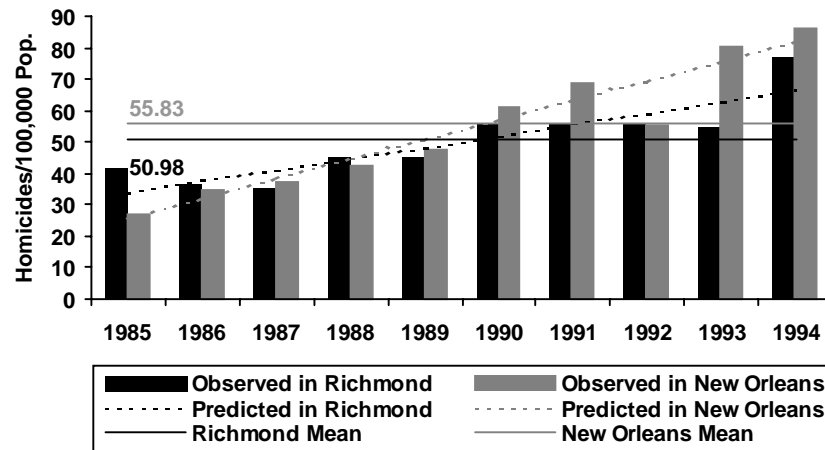
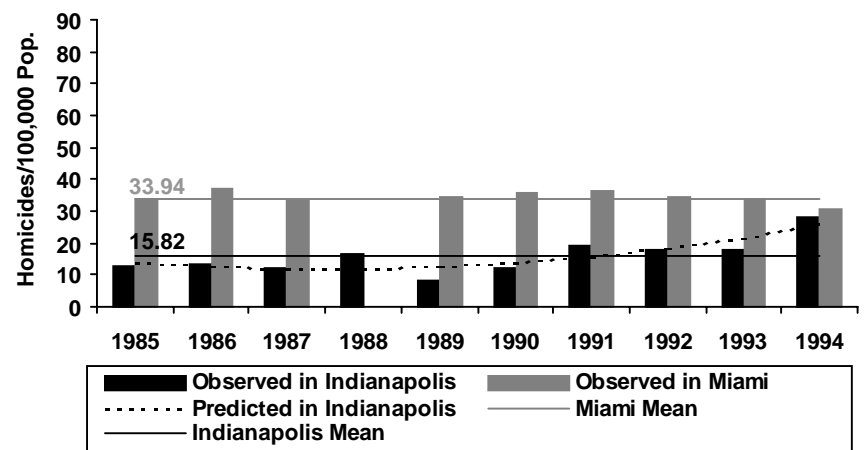
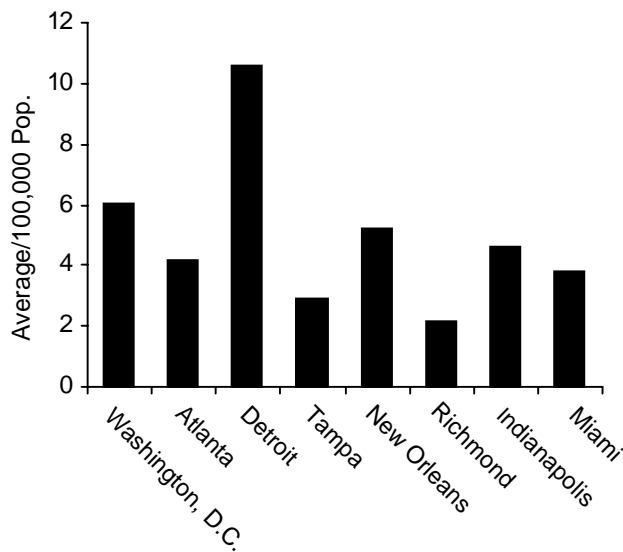


Figure 2-10. "No Change" and Increasing Quadratic Homicide Trends in Miami and Indianapolis



The selected cities represented meaningful (if not representative) contributions to the Nation's homicide picture. Although the selected 8 cities represented less than 10 percent of the total population of the 77-city set, they accounted for more than 15 percent of the homicides in these cities over the 10-year period. Figure 2–12 shows the percentage of population and of homicides for the 77 large cities that were due to

Figure 2–11. Average Population of Selected Cities, 1985–1994



the selected 8 cities and the remaining 69 cities. The population panel shows that the portion of the population represented by the eight selected cities diminished over the period (in part because of declining populations in some of the cities). The homicide panel suggests that the 8 cities contributed a disproportionate number of homicides to the 77 city totals (not surprising since cities above the median were selected), just as the 77 cities contributed a disproportionate number of homicides when their population is compared with the total U.S. population. Additional demographic information on the cities is provided in chapter 3. The eight cities selected are described briefly below.

Decreasing quadratic homicide rate trend: Washington, D.C., and Atlanta. For these cities, the homicide rate during the study period reached a maximum and then decreased (see figure 2–7). As

previously noted, these two cities were selected over the other decreasing quadratic cities because of the abruptness of the change from increasing to decreasing during this period. In the case of both Washington and Atlanta, the 1994 rate was lower than the peak but remained higher than the 1985 rate. Washington's homicide rate increased from 23.5 per 100,000 in 1985 to 80.6 per 100,000 in 1991 and then decreased to 70.0 per 100,000 in 1994. Washington's population declined by 9 percent during this period, from 626,000 to 570,000. The annual numbers of homicides from 1985 to 1994 were 147, 194, 225, 369, 434, 472, 482, 443, 454, and 399. Atlanta's homicide rate increased from 33.2 per 100,000 in 1985 to 58.6 in 1990 and then declined to 46.4 per 100,000 in 1994. Atlanta's population declined during this period by 6 percent, from 436,214 to 411,204. The annual numbers of homicides from 1985 to 1994 were 145, 186, 207, 217, 246, 231, 205, 198, 203, and 191.

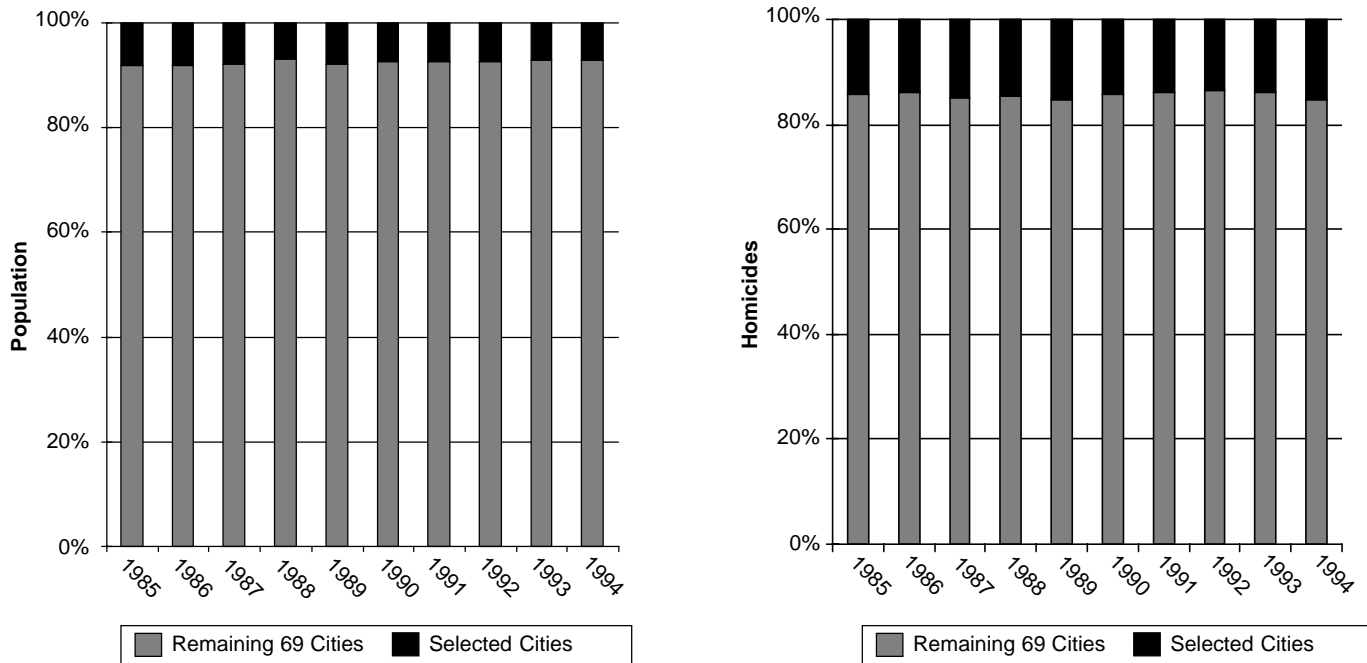
Decreasing linear trend: Tampa and Detroit.

Tampa's homicide rate declined from 24.5 per 100,000 in 1985 to 21.0 per 100,000 in 1994—a decrease of 14 percent (see figure 2–8). The annual numbers of homicides from 1985 to 1994 were 70, 79, 61, (missing), 57, 62, 64, 49, 43, and 62. Tampa's population increased by 3 percent during this period, from 275,770 to 283,412. Detroit's homicide rate declined from 58.2 per 100,000 in 1985 to 52.9 per 100,000 in 1994, a 9-percent decrease. The annual numbers of homicides from 1985 to 1994 were 635, 648, 686, 629, 624, 582, 615, 595, 579, and 541. Detroit's population decreased 14 percent from 1,115,659 to 957,828 between 1985 and 1994.

Increasing linear trend: New Orleans and Richmond.

New Orleans' homicide rate increased from 27.1 per 100,000 in 1985 to 85.8 per 100,000 in 1994, an increase of 217 percent (see figure 2–9). The annual numbers of homicides from 1985 to 1994 were 152, 197, 205, 228, 251, 304, 345, 279, 395, and 414. New Orleans' population decreased by 10 percent during this period, from 527,228 to 472,707. Richmond's homicide rate increased from 41.5 per 100,000 in 1985 to 77.2 per 100,000 in 1994, an increase of 86 percent. The annual numbers of homicides from 1985 to 1994 were 92, 82, 78, 99, 98, 113, 116, 117, 112, and 160. Richmond's population

Figure 2–12. Population and Homicide Counts of Eight Selected Cities During 1985–1994, Compared With 77 Largest U.S. Cities



Note: Missing data for a few years, a few cities.

decreased by 7 percent during this period, from 211,135 to 196,593.

Increasing quadratic trend: Indianapolis. The homicide rate for Indianapolis declined slightly and then increased during this period (see figure 2–10). Overall, the homicide rate increased from 12.5 per 100,000 in 1985 to 28.4 per 100,000 in 1994, an increase of 127 percent. The annual numbers of homicides from 1985 to 1994 were 59, 63, 57, 79, 41, 58, 95, 88, 68, and 108. Indianapolis’ population increased by 5 percent during this period, from 475,603 to 500,414.

No Change: Miami. The homicide rate for Miami changed little over the study period (see figure 2–10). The homicide rate ranged from a low of 33.2 in 1987 to a high of 36.4 in 1991. The annual numbers of homicides from 1985 to 1994 were 131, 148, 128, (missing), 132, 129, 134, 128, 127, and 116. Population numbers for Miami changed little over this period; they were 352,708 in 1985 and 363,221 in 1994.

As the analyses leading to site selection proceeded, a concurrent effort was under way to design the study. The project design, including approach and hypotheses to be investigated, is described in the next section.

Interview Development

Interviews for each structural area were constructed through an iterative process that included developing an initial set of questions organized around the hypotheses, reviewing the instrument by an external panel of experts, and pilot testing in two cities. Revisions to the interview instruments were made after the initial review and after each pilot.

An independent team of individuals with substantive knowledge in the domain areas reviewed the interview questions and hypotheses. As a result of this review, the hypotheses were refined and made more central to the interview instruments. Additionally, many of the interview questions were reformulated to

establish better definitional and comparative terms across sites. Finally, many questions were adjusted to more fully distinguish between perceived and actual events.

The initial set of interviewees included local representatives of Federal justice agencies, police department representatives, the sheriff, the probation office supervisor, representatives of the court (prosecutor, public defender, chief judge), representatives of the city government, school officials, the director of emergency medical services, and the coroner or medical examiner.

The interviews were pilot tested in two cities—Kansas City, which exhibited an increasing linear homicide rate trend, and Cleveland, which had a decreasing quadratic homicide rate trend. The intent of the pilot tests was to ensure that the interview questions were appropriate and comprehensive and that the scheduling protocol, which planned for about 20 interviews, was practical and feasible. Perhaps most significantly, the visits to the pilot cities convinced the research team that specific interview instruments were needed in certain key areas where they had previously been lacking. For example, prior to the pilot testing, interviewers had planned to question emergency medical service personnel using an instrument that contained generic questions about program resources and their adequacy. It became clear from the pilot studies that using nonspecific instruments was time consuming and distracting and raised the substantial risk of low inter-interviewer reliability across cities. That is, generic questions, probes, or contextual followup questions thought of by an interviewer in one city might not be asked by a second interviewer in another city. From the pilots, it was determined that the quality of data collection would improve if interviewers started with a specific instrument and modified or discarded questions as became necessary during each interview's course. These types of improvements were most common for programs and issues that tended to be substantially the same from city to city. Still, it was not possible to design specific interview instruments for some interviewees, primarily community groups, in advance of the questioning. Some organizations varied to such an extent from city to city that only a general

interview instrument would suffice. Nevertheless, information gathered from the pilot cities allowed the interview design team to include more salient interview instructions and guides.

The final set of data collection instruments consisted of more than 20 individual-specific interview instruments for the study.³ Generally, the instruments were organized so that questions were grouped around the hypotheses from a single domain, so that one interviewer could handle that portion of the interview. In general, respondents were asked for their perceptions and definition of the problem; how the individual or organization responded to the issue in terms of both policies and resources; how the issue had changed over time; and what data sources and tracking systems were used to monitor the problem. Both open-ended questions and scales were used in the interviews. An interview instrument typically included a mix of questions from the three domains. Significant emphasis was placed on eliciting information on interagency cooperation.

A second major result from the pilot interviews was that some interview subjects were added and some were abandoned. For example, it was decided that public housing administrators and public housing police would be interviewed separately. In contrast, despite intense interest in exploring the media's role with respect to homicide in a community, it was decided that media interviews were impractical. First, many media representatives appeared to have relatively short tenures in their communities, meaning they could not provide the longer term perspective. In addition, many media outlets tended to cover crime from a larger bureau, such as a city or metro desk. Most media outlets covered only a small fraction of the violent crimes and homicides that occur in their communities. Therefore, except for high-profile cases, few media representatives had a continuity of view with respect to crime issues. Although this problem perhaps could have been circumvented by interviewing reporters as a group or by interviewing assignment editors, this approach proved to be impractical as well. Instead, the media's reporting of crime issues was reviewed as part of the presite preparation, and specific questions about the media's impact and strategies were inserted into other interviews. Perhaps

it is meaningful that despite strong convictions that the media influence perceptions of homicide trends, the research team could not devise an adequate strategy for assessing that factor.

Project Implementation

The project was organized as a matrix comprising the three domain areas and the eight cities. Each project team member was assigned to a domain area and one or more cities. Domain team leaders were identified to collate findings, and city team leaders were identified to coordinate the site visits. Site visits were conducted by teams of three individuals (one representing each domain area) that visited a city for 3 days. Between 20 and 30 individuals were interviewed in each city. Following the site visit, each individual prepared a written report; subsequently, debriefings were held and another researcher reviewed and coded the interview instruments.

Prior to conducting interviews in the field, the interviewers were trained on the instruments at NIJ. As a mechanism for improving the quality of followup questions, interviewers became familiar with the basic crime trends, socioeconomic patterns, and cultural issues in the communities for which they were responsible. Interviewers contacted the sites and established the interview dates, thus helping them to become acquainted with the structure and operation of local institutions.

Site visits were conducted during the summer of 1996. Interviews were conducted by one or more team members, depending upon the extent to which questions for that interviewee represented one or more domains. For example, the police gang unit (or officer) was interviewed by team members from both the micro domain and the criminal justice system domain. The following individuals or appropriate representatives from the indicated agencies were interviewed:

- ◆ U.S. Attorney
- ◆ Drug Enforcement Administration
- ◆ Bureau of Alcohol, Tobacco and Firearms

- ◆ Federal Bureau of Investigation
- ◆ Police chief
- ◆ Police homicide unit
- ◆ Police gang unit
- ◆ Police drug unit
- ◆ Police juvenile unit
- ◆ Sheriff
- ◆ Probation office supervisor
- ◆ Prosecutor
- ◆ Public defender
- ◆ Chief judge
- ◆ Mayor or city manager
- ◆ School administrator
- ◆ School security
- ◆ Public housing administrator
- ◆ Public housing security
- ◆ Director of emergency medical services
- ◆ Coroner or medical examiner

In addition, efforts were made to conduct interviews with at least two representatives from community groups that dealt with issues relating to homicide. Community groups were typically identified through a review of newspaper files and contacts in city and police organizations. The team also talked with representatives from domestic violence prevention and intervention programs and people knowledgeable about the local economy.

Upon returning from the site visit, each interviewer provided an overview of findings relating to the hypotheses from his or her domain. Separately, a coder entered the data from each of the interview books into a database. The writeups, along with the interview books, were submitted to the domain leaders, who were responsible for analyzing the domain hypotheses across sites (in consultation with other team members). Additionally, two debriefings were held with all individuals who made site visits.

The purpose of these debriefings was to distill and collate hypothesis-specific information across the sites. The first debriefings were coordinated by the domain team leaders (who also made site visits). The second debriefings were conducted by individuals who were knowledgeable in the domain areas but had not been directly involved in the project.

Initial review of the data resulted in a secondary effort to collect and analyze additional existing data. For example, NIJ Drug Use Forecasting (DUF) data were used in the micro domain because five of the eight cities are DUF sites. Additionally, National Correctional Reporting Program, Bureau of Justice Statistics, data were consulted with respect to the incapacitation hypotheses. Finally, information was collected about domestic violence shelters and programs. The results of these and similar analyses are included in subsequent chapters.

Notes

1. Note that some of the no-change cities may have experienced considerable year-to-year variation in their annual homicide rates. We subsequently use “no change” to refer to cities in which such variation could not be fit to either a linear or quadratic curve. Because we had a limited data series (10 data points for each city), we did not attempt to fit more complex curves to the data.

2. In the increasing and decreasing linear categories, cities were ranked by the absolute value of their slope coefficients (β_1). Cities with larger slopes exhibited steeper, more dramatic trends. Quadratic category cities were ranked on the basis of the abruptness of the change in trend, which is captured by the quadratic coefficient (β_2). Cities that lacked a clear trend were ranked by their data’s mean absolute deviation from a horizontal line.

3. Copies of the interview instruments are available from Pamela K. Lattimore, Director, Criminal Justice and Criminal Behavior Division, Office of Research and Evaluation, NIJ, 810 Seventh Street N.W., Room 7333, Washington, DC 20531; or at pam@ojp.usdoj.gov.

APPENDIX 2-A

Homicide Counts and Rates for 77 Cities

Characteristics of Large Cities, 1985–1994 (ordered by mean number of homicides)				
City Number	City	Mean Homicide Rate	Mean Number of Homicides	Average Population
1	Lincoln	2.45	4.60	189,812.50
2	Mesa	3.88	10.50	273,330.10
3	Aurora	5.86	13.20	224,050.60
4	Lexington	6.75	15.11	223,805.20
5	Colorado Springs	5.47	15.40	282,705.90
6	Arlington	6.21	15.70	257,406.50
7	Anchorage	7.06	16.70	234,650.60
8	St. Paul	6.89	18.70	270,473.40
9	Raleigh	9.62	19.50	199,202.70
10	Virginia Beach	5.82	21.80	374,395.60
11	Anaheim	8.50	22.40	260,574.50
12	Akron	10.50	23.70	225,559.70
13	Riverside	11.19	24.80	218,641.60
14	Jersey City	11.57	26.10	225,758.80
15	Corpus Christi	10.05	26.70	266,089.10
16	Omaha	7.76	27.22	351,612.10
17	St. Petersburg	12.08	29.67	245,497.40
18	Tucson	8.31	33.78	405,328.20
19	Honolulu	4.02	34.00	848,417.90
20	Toledo	10.63	35.89	338,332.10
21	Mobile	18.35	37.50	204,611.60
22	El Paso	7.37	38.30	516,793.40
23	Louisville	14.27	39.78	279,273.20
24	San Jose	5.21	39.80	766,558.20

Characteristics of Large Cities, 1985–1994
(ordered by mean number of homicides)

City Number	City	Mean Homicide Rate	Mean Number of Homicides	Average Population
25	Tulsa	10.79	40.30	373,315.00
26	Austin	9.09	41.90	466,541.00
27	Stockton	20.90	42.60	202,299.50
28	Pittsburgh	11.28	42.70	380,892.70
29	Rochester	18.93	44.50	235,679.70
30	Portland	11.45	47.80	420,338.50
31	Cincinnati	13.01	48.10	369,674.40
32	Baton Rouge	20.76	48.80	236,560.90
33	Santa Ana	18.28	49.90	268,712.20
34	Minneapolis	13.84	50.67	364,943.30
35	Buffalo	15.58	51.00	328,051.10
36	Seattle	10.64	55.10	517,583.20
37	Jackson	28.42	57.40	203,104.60
38	Fresno	17.33	58.30	330,423.70
39	Norfolk	21.64	58.80	274,002.50
40	Sacramento	16.93	60.00	355,829.80
41	Tampa	21.07	60.78	288,495.30
42	Oklahoma City	13.87	62.00	446,793.80
43	Indianapolis	15.82	71.60	461,307.70
44	Denver	15.47	77.10	498,558.30
45	Las Vegas	13.12	77.70	586,942.60
46	Charlotte	20.02	79.50	393,264.30
47	Nashville	16.56	82.60	500,005.90
48	Long Beach	19.68	84.00	423,755.80
49	Columbus	15.38	93.90	606,963.00
50	Boston	17.01	97.20	571,328.90
51	San Francisco	13.43	100.00	744,865.20
52	Newark	34.28	101.20	295,678.10
53	Richmond	50.29	106.70	213,634.00
54	Birmingham	40.56	111.40	275,958.20
55	Milwaukee	19.16	119.60	622,444.20

Characteristics of Large Cities, 1985–1994
(ordered by mean number of homicides)

City Number	City	Mean Homicide Rate	Mean Number of Homicides	Average Population
56	San Diego	11.41	125.30	1,093,809.00
57	Miami	34.49	130.33	377,927.10
58	Jacksonville	20.27	130.89	646,053.20
59	Kansas City	29.77	131.30	441,403.50
60	Oakland	35.68	133.30	372,777.60
61	Phoenix	13.57	133.50	973,931.80
62	Fort Worth	31.79	141.80	445,837.90
63	Cleveland	28.30	148.00	525,022.30
64	Memphis	25.69	163.80	640,115.60
65	San Antonio	19.94	187.60	939,786.30
66	St. Louis	49.12	199.80	410,168.00
67	Atlanta	48.41	202.90	420,532.00
68	New Orleans	54.07	278.00	522,980.90
69	Baltimore	37.08	279.30	755,832.80
70	Washington, D.C.	60.42	361.90	603,990.00
71	Dallas	35.56	363.40	1,022,514.00
72	Philadelphia	24.91	401.40	1,615,011.00
73	Houston	26.59	454.90	1,717,886.00
74	Detroit	58.07	613.40	1,055,606.00
75	Chicago	27.66	798.70	2,902,224.00
76	Los Angeles	26.30	906.00	3,436,760.00
77	New York	25.07	1834.00	7,309,488.00

Note: Study cities are shown in bold.

Homicide Trends

This chapter describes the homicide trends between 1985 and 1994 in the eight study cities. Much of the analysis examines differences between genders and among ages and racial groups—in terms of both those being killed and those killing. This focus should not be seen as implying a *causal* relationship between these factors and homicide victimization or perpetration since these factors may be related to and reflect other constructs for which data are not readily available—such as socioeconomic status or risk-taking behavior. However, males, blacks, and adolescents and young adults appear to be more involved in homicide and other violent crimes, as both victims and perpetrators, than other demographic groups.

The discussion of homicide trends will focus on homicide victimization and arrest trends for specific groups and the extent to which specific groups or types of homicide account for the overall trends. As would be expected from previous studies, changes in homicide trends in the eight cities between 1985 and 1994 were heavily influenced by changes in homicide trends among black males. Beyond that generalization, however, lies substantial variability among the cities.

Population and Homicide Victimization

This section examines homicide victimization in the context of population composition and change.¹ These group-specific analyses enhance understanding of the homicide problem and how it differs among cities and across time, which, in turn, can help inform the search

for factors explaining the changing homicide trends and, perhaps, policies to influence those changes.

Figure 3–1 shows population by year and race for each city. The cities vary in size, growth trend, and racial composition. Detroit is the largest of the cities, with a total population of roughly 1 million. Richmond and Tampa are the smallest, with populations between 200,000 and 300,000. Five of the eight cities experienced population declines over the 10-year period. Though still the largest in 1994, Detroit decreased in population more than the other four cities, dropping 14 percent from 1,115,659 in 1985 to 957,828 in 1994. Washington, D.C., Atlanta, Richmond, and New Orleans each decreased in population between 5 and 10 percent from 1985 to 1994. The populations in the remaining cities—Tampa, Indianapolis, and Miami—increased between 2.5 and 5 percent.

All five cities that experienced overall declines in population were majority black. Three of the five experienced large declines in the white population. For example, much of Detroit's population decrease was due to a sharp decline among the white population; whites made up 28 percent of Detroit's population in 1985 but only 15 percent in 1994. Similarly, in New Orleans, the white population dropped from 39 percent in 1985 to 31 percent in 1994, and in Richmond, the white population decreased from 46 to 41 percent. In Washington, D.C., and Atlanta, the other cities experiencing population declines, the white population remained fairly steady at roughly 30 percent of the total population. In Washington, D.C.,

the total black population declined from 68 percent in 1985 to 64 percent in 1994. The other three cities remained predominantly white—in 1994, Indianapolis was 75 percent white, Tampa was 70 percent white, and Miami was 66 percent white.

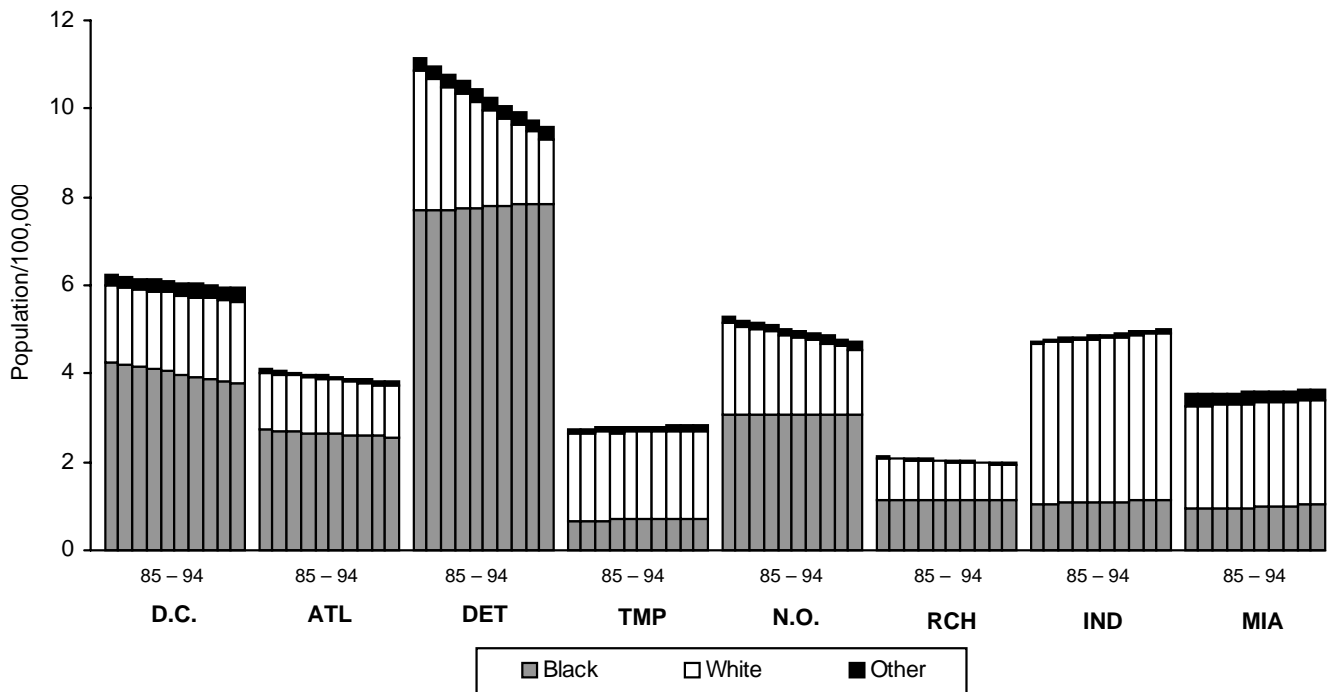
Throughout the timeframe, females were in the slight majority in all eight cities, ranging (in 1994) from 51 percent in Miami to 54 percent in Detroit, New Orleans, and Richmond. The only city in which the female population changed by more than 1 percent was Miami, where it decreased from 53 to 51 percent.

There were also changes in the age composition of the populations in all of the cities. All experienced population declines in the 13- to 17-year-old and 18- to 24-year-old age groups over the time period. In 1985, the percentage of the population between 13 and 17 ranged from 6 percent in Washington, D.C., and Richmond to 8.3 percent in Detroit. By 1994, these percentages had dropped to 4 percent in Washington, D.C., and Richmond and 7.7 percent in Detroit. In

1985, the percentage of the population between 18 and 24 ranged from 10 percent in Miami to 14 percent in Washington, D.C., Atlanta, and Richmond. By 1994, these percentages had dropped to 8 percent in Miami and 12 to 13 percent in Washington, D.C., Atlanta, and Richmond.

Given the differences in population size and composition among the eight study cities, the researchers expected to see differences in homicide. The following section will focus on homicide victimization rates, adjusted for population differences. Before looking at victimization rates, however, it is worth looking at the homicide counts for each city.² Table 3-1 provides a summary of homicide counts in each city for 1985 and 1994, showing distribution by age group, race, and gender. (Homicide victimization data for the entire period are presented in figures 3-2 through 3-12.) Overall, the typical homicide victim was more likely in 1994 than in 1985 to be male, black, and under 25 years of age.

Figure 3-1. Cities' Population, by Race, 1985-1994



Note: Cities are abbreviated as follows: Washington, D.C. = D.C., Atlanta = ATL, Detroit = DET, Tampa = TMP, New Orleans = N.O., Richmond = RCH, Indianapolis = IND, Miami = MIA.

Table 3–1. Distribution of Homicide Victimization Counts, 1985 and 1994*

City	Homicide Counts		Percent Female		Percent Black		Percent 17 or Younger		Percent 18–24 Years	
	1985	1994	1985	1994	1985	1994	1985	1994	1985	1994
Washington, D.C.	142	390	19.0	10.0	92.2	91.8	4.9	8.2	22.5	29.5
Atlanta	151	201	19.2	21.4	85.4	88.1	5.3	9.4	23.2	27.4
Detroit	663	575	19.2	16.3	82.5	87.8	9.0	8.5	22.8	30.8
Tampa	72	64	26.4	29.7	55.6	37.5	2.8	9.4	18.1	20.3
New Orleans	156	423	18.6	13.5	79.5	90.5	6.4	7.6	26.3	32.6
Richmond	93	157	19.4	12.7	78.5	86.6	6.5	7.0	18.3	34.3
Indianapolis	58	111	31.0	17.1	60.3	78.4	6.9	9.9	24.1	23.4
Miami	131	120	16.8	20.8	50.4	61.7	1.5	10.0	16.8	24.2
Total	1,466	2,041	19.7	15.5	78.1	85.4	6.8	8.4	22.2	29.7

*Counts reflect data from the Supplemental Homicide Reports for only one victim per recorded incident; thus, data undercount total victims in a few instances (by 17 in 1985 and 48 in 1994).

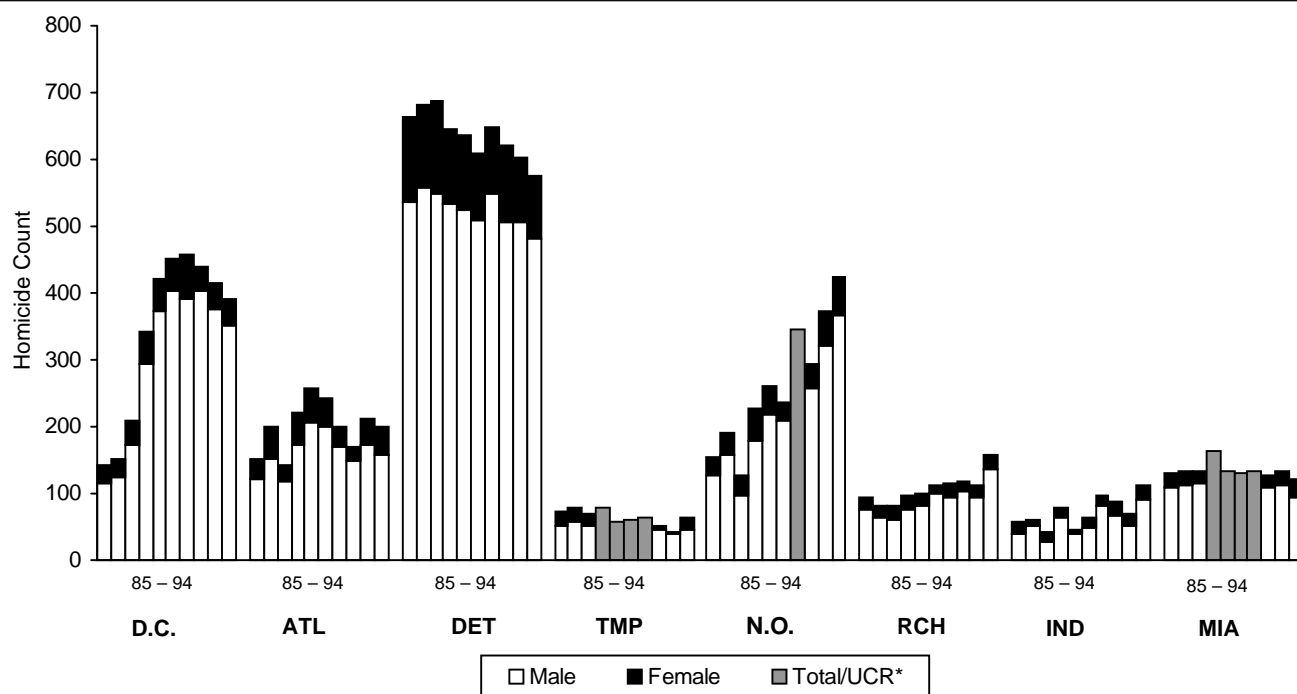
Figure 3–2 shows total homicide counts by city, year, and gender. As would be expected if the changes in homicide counts dominated changes in population, the count patterns roughly approximated the trends in homicide victimization rates that were used to select the cities (see figure 2–6). Thus, the counts for Washington, D.C., and Atlanta exhibited decreasing quadratic trends; Detroit and Tampa exhibited decreasing linear trends; New Orleans, Richmond, and Indianapolis exhibited increasing trends; and Miami’s homicide counts were roughly constant over the period.

Figure 3–2 also shows differences in the number of homicides among the eight cities. Not surprisingly, the most populous city, Detroit, had the most homicides. In contrast, a small city, Tampa, the other linearly decreasing city, had so few homicides that the declining trend is barely apparent on a graph scaled to accommodate Detroit’s numbers. While the extreme difference in homicide between Detroit and Tampa decreases somewhat when the cities’ populations are taken in account—the large difference in numbers is worth keeping in mind.

Washington, D.C., New Orleans, and Indianapolis had roughly similar population levels over the period but experienced different homicide patterns. The numbers of homicides in Washington, D.C., and New Orleans were comparable in 1985—147 and 152, respectively—and increased over the following years. However, unlike Washington, D.C., whose homicide count began to decline substantially in 1992, the count in New Orleans continued to rise through 1994. The homicide count in Indianapolis, which varied between 59 and 95, was much lower than in Washington, D.C., and New Orleans. Unlike these other two cities, homicide counts in Indianapolis declined slightly in 1989 before beginning to rise rapidly in the last 5 years of the study period.

Figure 3–2 also shows that most homicide victims were males. However, there was variation among the cities. With only a few exceptions, the *number* of female homicide victims varied over time relatively less than the number of male homicide victims. However, the *fraction* of a city’s total homicides that

Figure 3–2. Homicide Victimization Counts, by Gender, 1985–1994



*SHR data were not available for New Orleans, 1991, and Miami and Tampa, 1988–1991. Shown, when appropriate, are aggregate homicide counts reported to the Uniform Crime Reports Return A.

was female did vary considerably in some cities. Overall, females represented about 20 percent of all victims in 1985 but only 15.5 percent in 1994. In five cities, female victimization as a fraction of total homicides showed clear declines between 1985 and 1994—for example, dropping from 19 to 10 percent in Washington, D.C., and from 31 to 17 percent in Indianapolis. Exceptions were Atlanta (19 percent female in 1985, 21 percent in 1994), Tampa (26 percent in 1985 and 30 percent in 1994), and Miami (17 percent in 1985 and 21 percent in 1994).

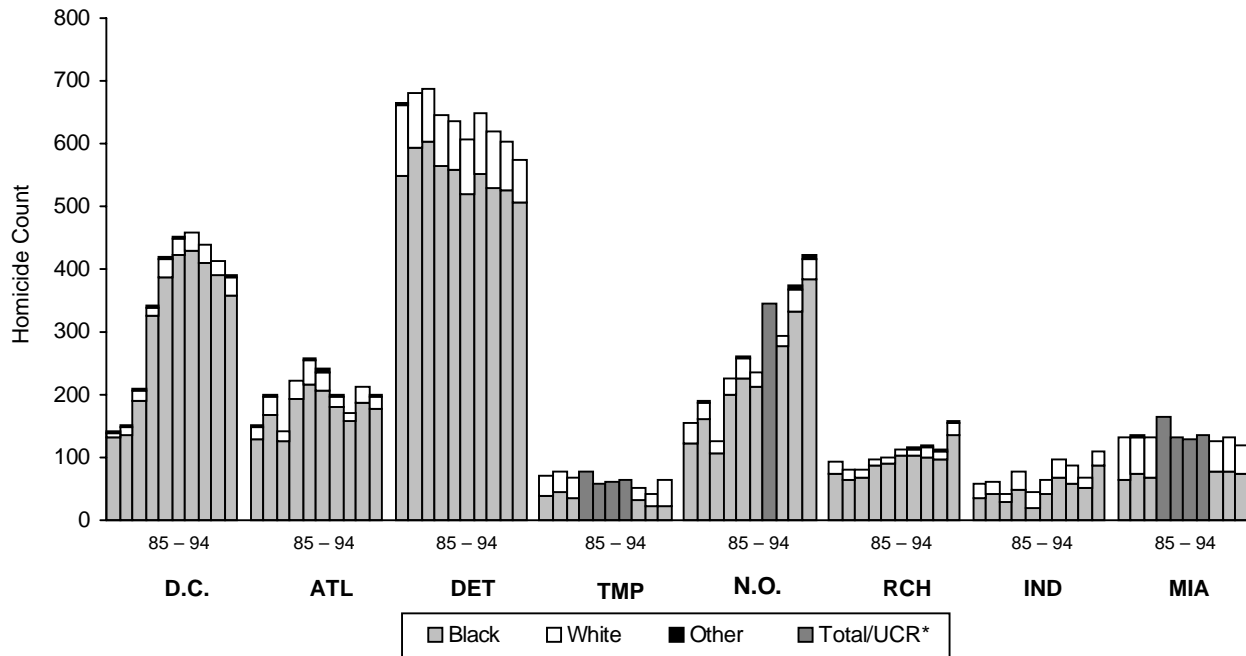
Figure 3–3 presents the racial distribution of the total homicide counts shown in figure 3–2. This figure shows that most victims were black—in Washington, D.C., more than 90 percent of all homicide victims were black throughout the study period. Even in the cities whose populations were 70 percent or more white, 50 percent or more of the victims were black. Further, in all cities, the percentage of victims who were black increased or stayed constant over the study period. (Tampa is an exception, of sorts—56 percent

of victims were black in 1985 and 38 percent in 1994; however, 54 percent of victims were black in 1993.)

Figures 3–4 and 3–5 show victimization counts for males and females, respectively, by city, year, and race. Not surprisingly, since most victims were male, figures 3–3 and 3–4 are quite similar. Figure 3–5 shows female victim counts by city and year. (Scales of the vertical axis differ.) The trends for female homicide victimization in Detroit and New Orleans mirrored those of total homicides, in contrast to the other six cities that showed relatively constant female homicide counts. Finally, female victims in Richmond and Indianapolis appeared slightly more likely to have been white than male victims.

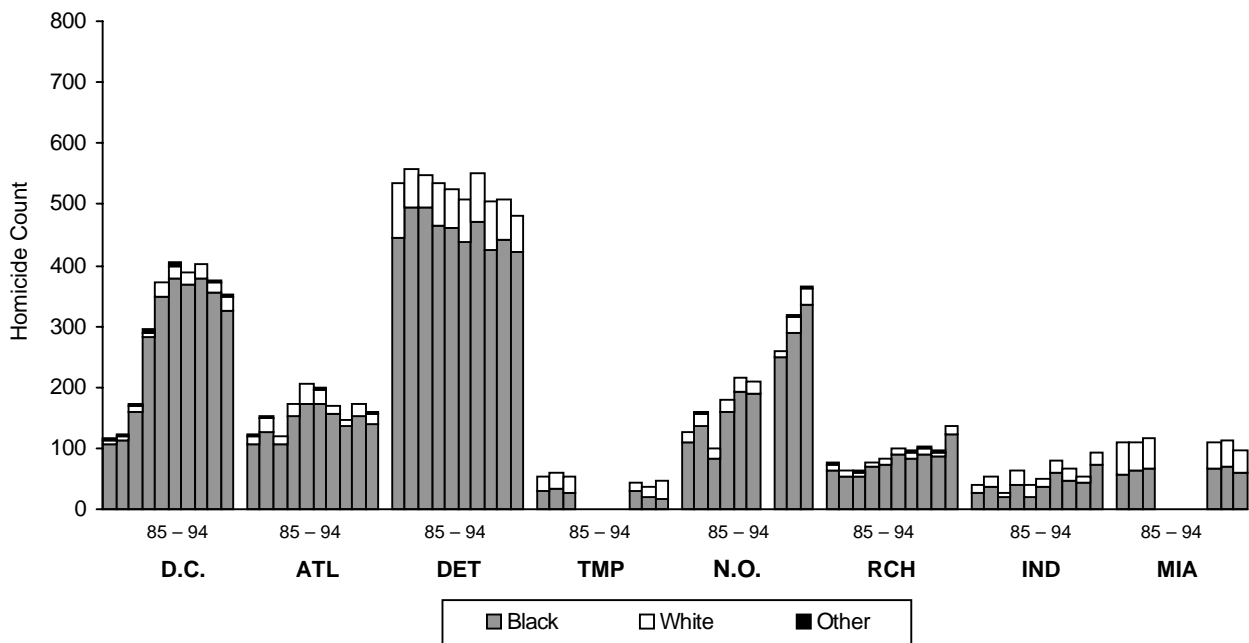
Figure 3–6 shows total homicides by city, year, and age group. Three age classifications are used—17 years old and younger, 18 to 24 years old, and 25 years old and older. The two younger groups contributed disproportionately to the homicide counts in comparison with their representation in the population.

Figure 3–3. Homicide Victimization Counts, by Race, 1985–1994



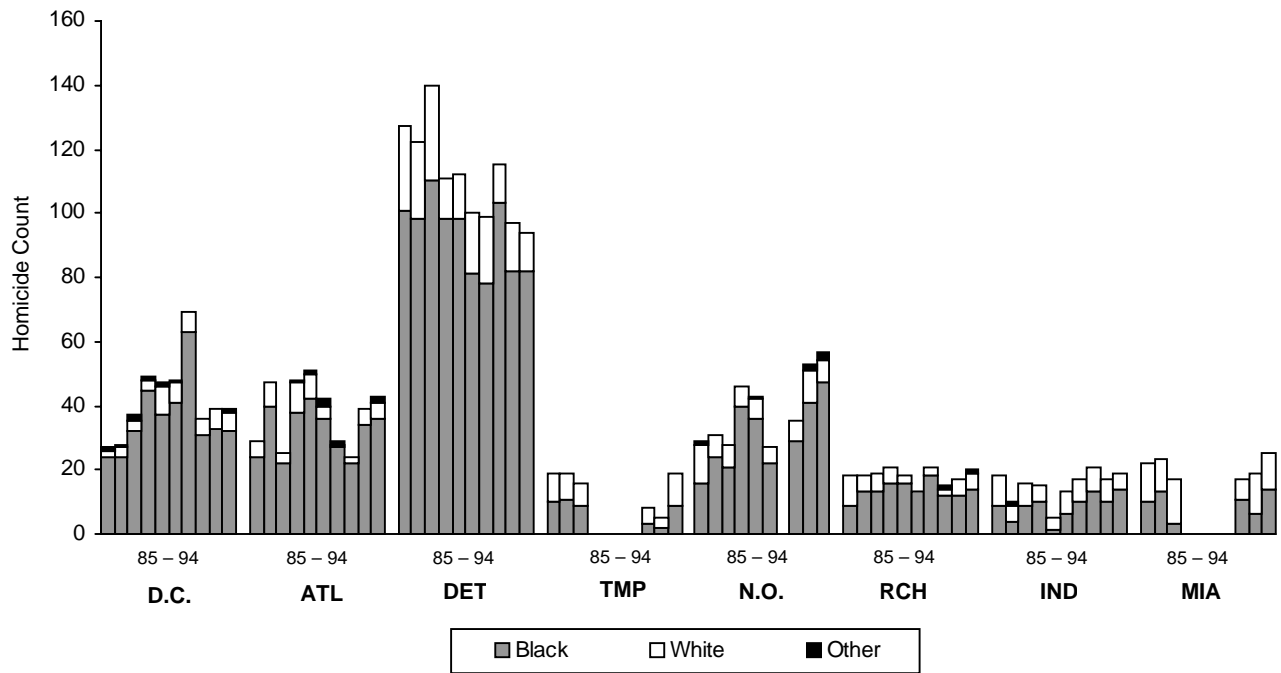
*SHR data were not available for New Orleans, 1991, and Miami and Tampa, 1988–1991. Shown, when appropriate, are aggregate homicide counts reported to the Uniform Crime Reports Return A.

Figure 3–4. Male Homicide Victimization Counts, by Race, 1985–1994



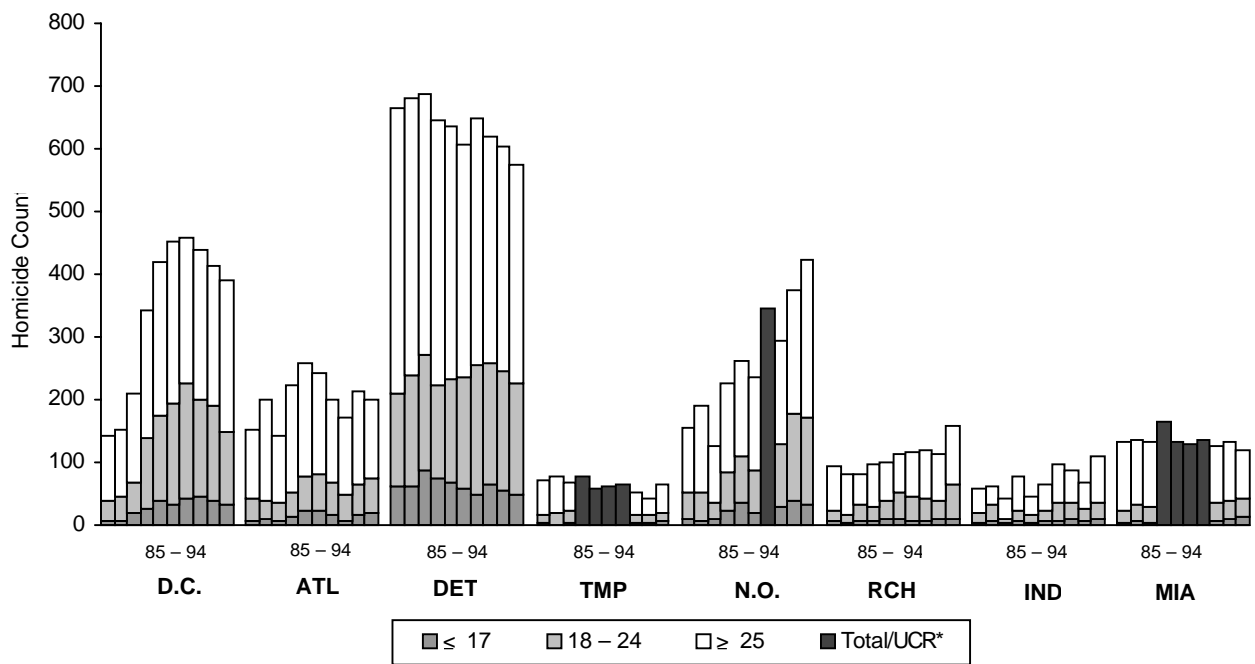
Note: Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

Figure 3–5. Female Homicide Victimization Counts, by Race, 1985–1994



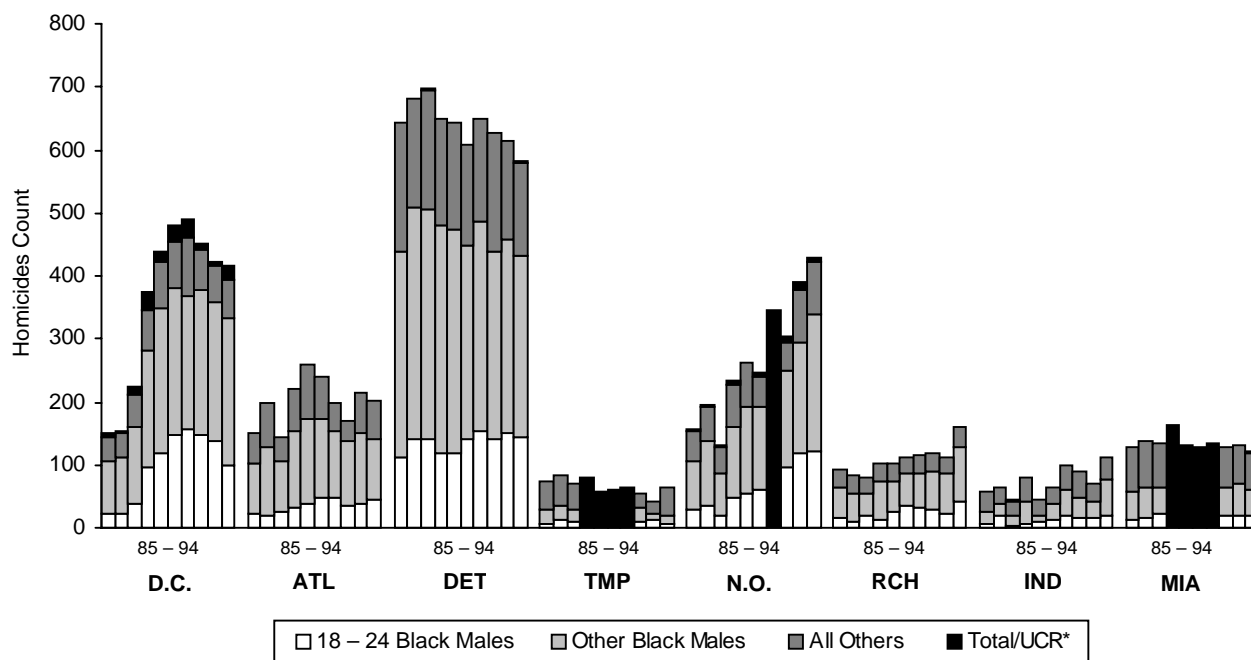
Note: The scale used differs from figure 3–4; missing data for New Orleans, 1991, and Miami and Tampa, 1988–1991.

Figure 3–6. Homicide Victimization Counts, by Age Group, 1985–1994



*SHR data were not available for New Orleans, 1991, and Miami and Tampa 1988–1991. Shown, when appropriate, are aggregate homicide counts reported to the Uniform Crime Reports Return A.

Figure 3–7. Homicide Victimization Counts of Black Males Compared With Total Homicides, 1985–1994



*SHR data were not available for New Orleans, 1991, and Miami and Tampa, 1988–1991. Shown, when appropriate, are aggregate homicide counts reported to the Uniform Crime Reports Return A.

For the eight cities combined, homicide victims 17 years of age and younger represented 6.8 percent of all homicide victims in 1985 and 8.4 percent in 1994. In comparison, about 5 percent of the populations were between 13 and 17 (relatively few homicide victims are younger than 13). The 18- to 24-year-old age group, in particular, appears to have been over-represented among homicide victims. This group represented about 13 percent of the populations and roughly 25 percent of the homicides over the study period, increasing from 22.2 percent of the homicide total in 1985 to 29.7 percent in 1994. There is some variation across the cities, however. Homicide victims in Tampa and Miami were relatively less likely to be younger than 25, particularly in 1985, than those in other cities (see table 3–1).

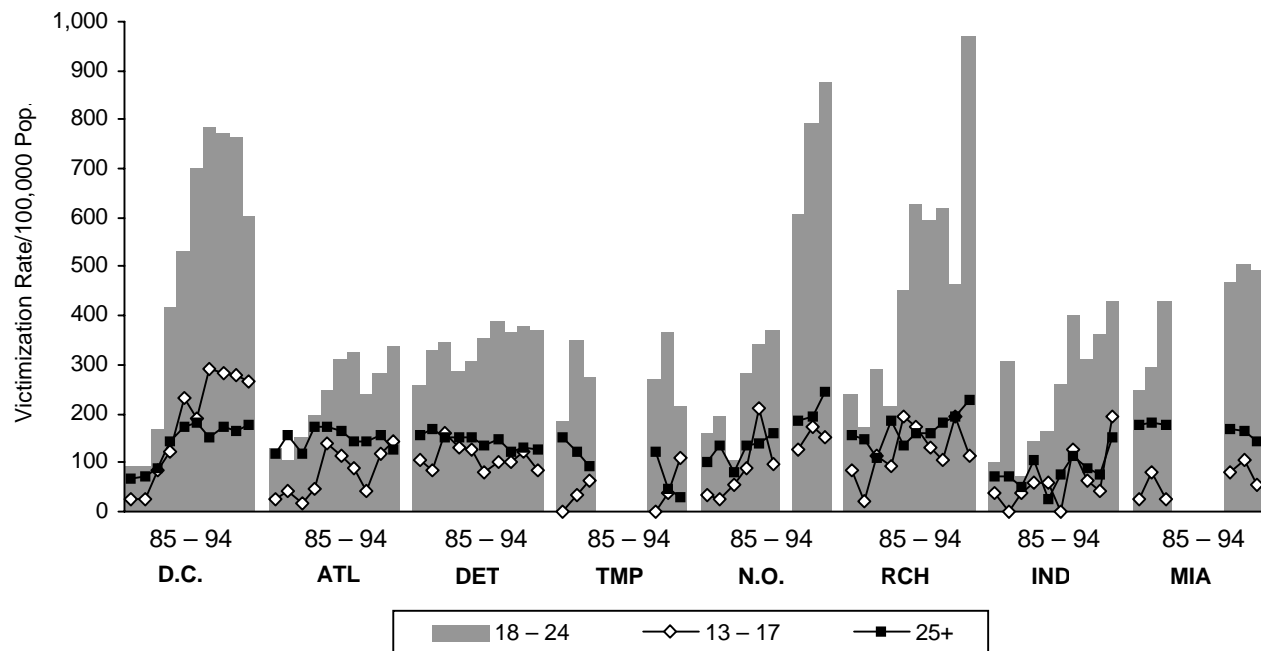
Figure 3–7 shows the significant contributions to homicide victimization counts of one small demographic group—18- to 24-year-old black males. This trend mirrored the overall trend in all cities except Detroit, where homicides among this group remained constant in the face of a declining overall trend.

Detroit, however, experienced a significant decline in its white population over this period. The overrepresentation of this small demographic group among homicide victims is brought into sharper focus in the next section, where victimization rates are discussed.

Homicide Victimization Rates

This section examines homicide victimization rates, defined in terms of homicides per 100,000 population (or population subgroup). To illuminate the differences in homicide victimization rates of various age/race/gender groups, this section presents group-specific homicide rates for black males, white males, black females, and white females by age (13 to 17 years old, 18 to 24 years old, and 25 years old and over). These groupings differ slightly from those used earlier. First, because of the very small number of people whose race was categorized as “other” (neither black nor white) in the cities, this section focuses only on blacks and whites. Second, because children age 12 and under are rarely involved in homicide, rates are calculated for youths age 13 to 17.

Figure 3–8. Black Male Homicide Victimization Rates, by Age, 1985–1994



Note: Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

For comparison purposes, recall that the overall homicide victimization rate in the United States over the study period was in the 7 to 10 per 100,000 range. For the 77 largest U.S. cities, the median average annual homicide rate was 15.8 per 100,000, with values ranging from 2.4 per 100,000 to 60.4 per 100,000. As was shown in figure 2–6, the overall homicide victimization rate in the eight cities over the study period ranged from a low of 8.4 per 100,000 (Indianapolis, 1989) to a high of 85.8 per 100,000 (New Orleans, 1994).

Homicide victimization rates by city, year, and age for black males, white males, black females, and white females are shown in figures 3–8 through 3–11, respectively. Because of substantial variation in the level of homicide victimization across the race/gender groups, different scales are used.

Figure 3–8 shows victimization rates for black males in three age groups—13 to 17, 18 to 24, and 25 and older. In most cases, the rates for 18- to 24-year-olds

dominate those for the other two age groups; these trends are shown by clustered bars in figure 3–8. First, the victimization rates for 18- to 24-year-old black males increased over the study period in all cities, reaching extraordinary levels in some of these cities—nearly 1,000 per 100,000 in Richmond in 1994. These increases were experienced regardless of the city’s overall homicide victimization rate trend. Even in Washington, D.C., where the homicide victimization rate trend for this group mirrored the overall decreasing quadratic trend, the victimization rate was still substantially higher for 18- to 24-year-old black males in 1994 than in 1985. Figure 3–8 also shows considerable variation in the homicide victimization rate of 18- to 24-year-old black males among the cities over time. During some years, the levels in Washington, D.C., New Orleans, and Richmond were more than twice those experienced in other cities. The victimization rates for this group were roughly comparable for Atlanta, Detroit, Tampa, Indianapolis, and Miami—again in contrast to the overall victimization rate trends in these cities. These levels were also

much higher in most cases than those experienced by younger and older black males.

In Washington, D.C., New Orleans, and Richmond, the homicide victimization rate for black males ages 18 to 24 increased dramatically in the late 1980s and early 1990s. In Washington, D.C., the rate climbed from less than 100 per 100,000 in 1985 to more than 400 in 1988 and nearly 800 in 1991 before declining to about 600 per 100,000 in 1994 (mirroring at a much higher level the overall trend for Washington, D.C.). Similarly, the homicide victimization rates for this group in New Orleans increased from 161 per 100,000 in 1985 to 876 per 100,000 in 1994, and in Richmond from 242 per 100,000 to 969 per 100,000 over this period. The implications of such extremely high homicide victimization rates are profound. For example, from 1989 through 1994, the homicide rate for black males ages 18 to 24 in Washington, D.C., averaged 692 per 100,000. For a black male who was 18 years old in 1989, the aggregate chance of being murdered over the next 6 years was roughly 4 in 100 (6×0.0069).³ For a hypothetical 18-year-old cohort in 1989, 1 in 24 would be murdered before reaching age 24. This is the most extreme case for these cities for such a long timeframe, but occasionally rates were even higher for brief periods. New Orleans and Richmond, whose overall homicide trends were increasing linear, were very similar in group-specific homicide victimization trends, with black males ages 18 to 24 falling prey to murder at staggering rates by 1994. Of 4,748 black males ages 18 to 24 living in Richmond in 1994, 46 were murdered—roughly 1 in 100. In New Orleans in 1994, 131 of 14,946 black males ages 18 to 24 were murdered—slightly less than 1 in 100.

Victimization rate trends for black males ages 18 to 24 were roughly comparable for Atlanta, Detroit, Tampa, Indianapolis, and Miami—increasing between 1985 and 1994 in all of these cities, regardless of overall trends. In Detroit and Tampa, the homicide victimization rate for black males ages 18 to 24 increased while the overall rate for the city decreased, which should be remembered when attempting to explain the overall decrease in homicide rates from 1985 to 1994. In Miami, the overall homicide rate remained remarkably stable from 1985 through 1994;

however, for black males ages 18 to 24, the rate increased from 250 per 100,000 in 1985 to around 500 per 100,000 in 1993 and 1994.

The trend lines in figure 3–8 show the victimization rates for black males 13 to 17 years old and 25 years and older. Overall, rates across cities were much more comparable for these age groups and, in general, were higher for the 25+ age group than the 13 to 17 age group. Rates increased for all cities for the youngest group, but there was variation among the cities in the trend for the oldest group. Four cities—Washington, D.C., New Orleans, Richmond, and Indianapolis—show clear increases in victimization rates for both age groups over the study period (and, thus, for all black males). Three cities—Detroit, Tampa, and Miami—show declines for the 25+ age group, while Atlanta experienced some increase over the study period but returned by 1994 to a level comparable to that experienced in 1985. Atlanta, Tampa, and Miami also experienced increases in the victimization rates for the 13- to 17-year-old group, although the rates for Tampa and Miami should be interpreted cautiously since these cities experienced relatively few homicides among this youngest group.⁴

Figure 3–9 shows city-specific trends for homicide victimization rates for white males. White males were murdered at uniformly lower rates than black males. Overall, homicide victimization rates for white males were less than 100 per 100,000 and, in most cases, less than 50 per 100,000. Also, with the exception of Detroit, which is discussed below, white male victimization rates were more uniform across the cities and across the study period than were black male victimization rates. Although the trends in figure 3–9 appear more erratic over time than those in figure 3–8, this variability reflects the relatively few homicides each point represents—14 and 11 percent of all homicides in these eight cities in 1985 and 1994, respectively, and 17 and 13 percent of all male homicides in 1985 and 1994, respectively. As with black males, the 18- to 24-year-old age group experienced the highest victimization rates. Also, the victimization rates for the 18- to 24-year-old age group increased for all cities between 1985 and 1994. However, the differences between the rates for the three age groups were much less pronounced for white males than black males.

Although all cities experienced an increase in the victimization rates of 18- to 24-year-old white males over the 10-year study period, in Detroit, the homicide rate for this group increased more than four-fold—from 71 per 100,000 in 1985 to 296 per 100,000 in 1994. Detroit is the only city of the eight in which white males of any age suffered such a high homicide rate. The white population declined in Detroit over the study period; however, this decline does not fully account for the upsurge in the rate for this group. Over the study period, the white population in Detroit declined 54 percent while homicide counts among all white males dropped 35 percent. However, the number of homicides among white males ages 18 to 24 remained constant. The number of white males age 25 and over in the population declined even more than the number of those ages 18 to 24, but the homicide rate remained fairly constant for the older group over the study period.

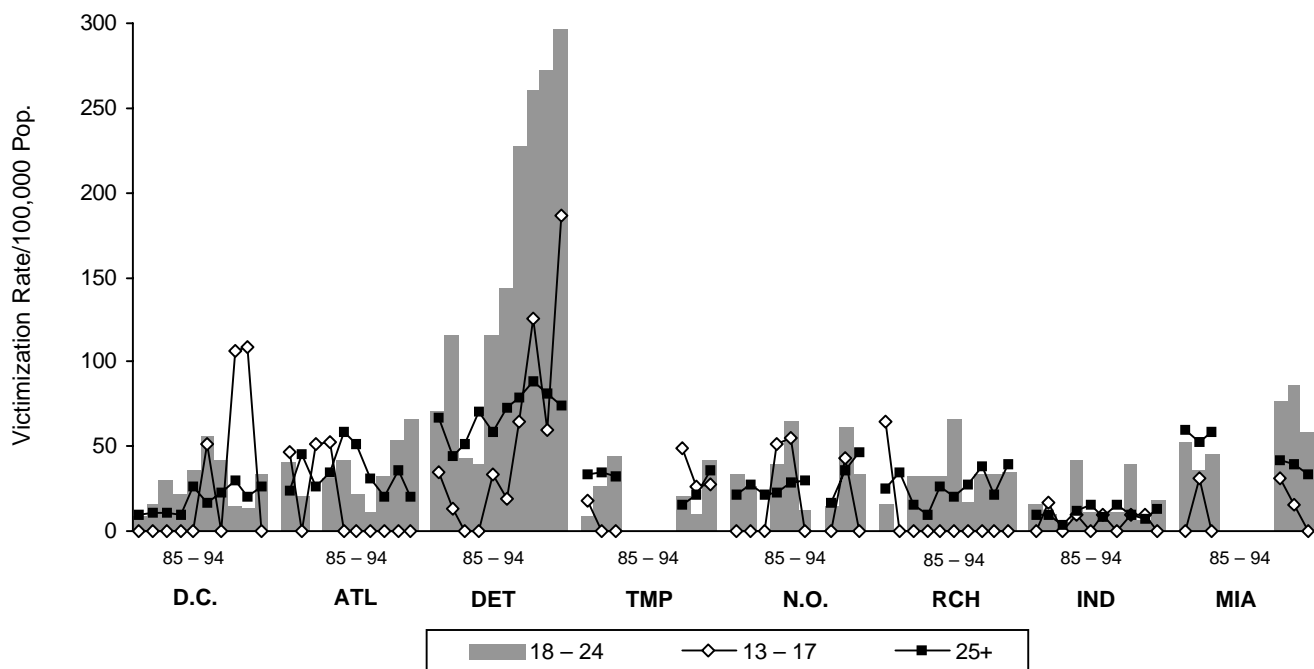
White males ages 18 to 24 experienced increases in homicide victimization rates of more than 100 percent

in Washington, D.C., Tampa, and Richmond (in addition to Detroit) between 1985 and 1994. Washington's rate climbed from 8 per 100,000 to 33 per 100,000; Tampa's from 8 per 100,000 to 42 per 100,000; and Richmond's from 15 per 100,000 to 35 per 100,000. (Again, Tampa's rate represents few homicides, and changes should be interpreted cautiously.) Rates increased about 50 percent in Atlanta, from 41 per 100,000 to 66 per 100,000, and only slightly in New Orleans, Indianapolis, and Miami.

Victimization rates for the 25+ group were much more comparable to those for the 18 to 24 group among white males than black males. Overall, four cities (Washington, D.C., Detroit, New Orleans, and Richmond) experienced upward trends in the victimization rate for the 25+ group, three showed relatively constant trends, and one city—Miami—demonstrated a 50-percent decline between 1985 and 1994.

Of the trends shown in figures 3–8 and 3–9, the most striking difference is between the victimization rates of black and white 13- to 17-year-old youths. Figure

Figure 3–9. White Male Homicide Victimization Rates, by Age, 1985–1994



Note: The scale used differs from figure 3–8; missing data for New Orleans, 1991, and Miami and Tampa, 1988–1991.

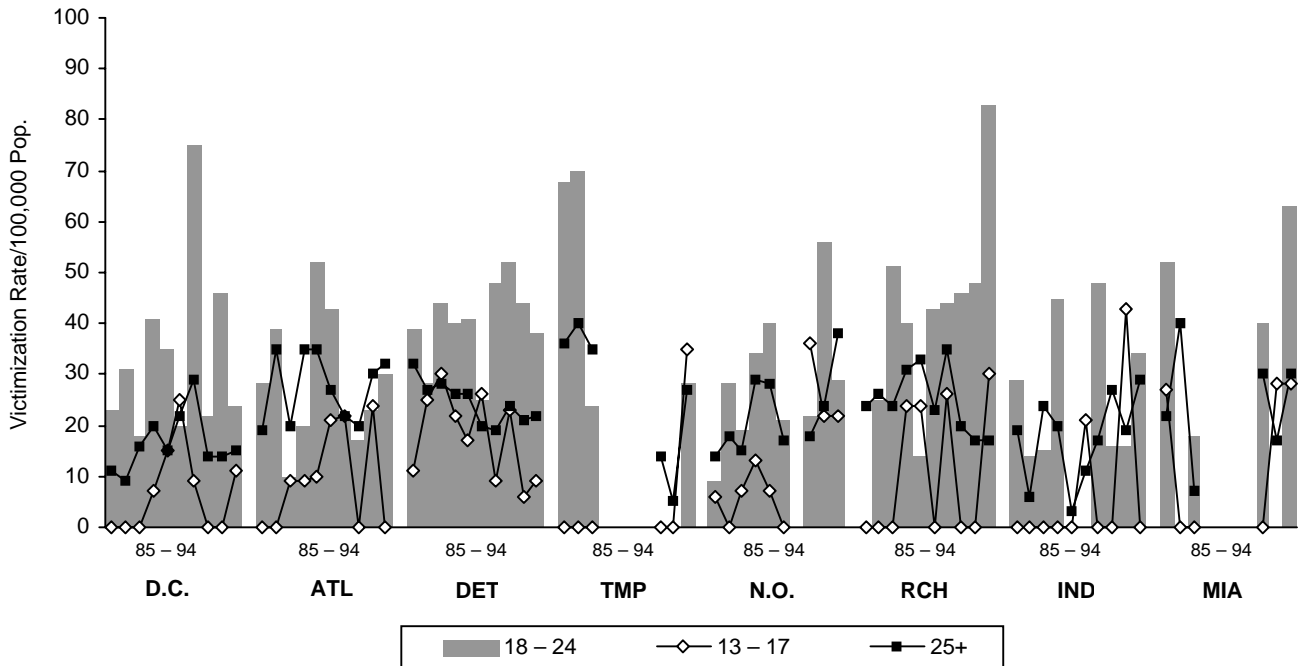
3–8 shows that, by 1994, rates of 100 homicides per 100,000 or higher were observed in most cities for black youths. In contrast, as can be seen in figure 3–9, the modal victimization rate across the 10-year period for white male youths was zero per 100,000, with the exception of Detroit. Further, for white youths, higher rates generally represented only one or two homicides during the year. As figure 3–8 shows low homicide victimization rates for black youths during the early part of the study period, it is clear that increases in youth homicides were concentrated among black rather than white youths in these cities. (Detroit and Richmond were exceptions in that these cities exhibited comparatively high homicide victimization rates for black youths in the mid-1980s.)

Figure 3–10 shows homicide victimization rates for black females. (The maximum value for the vertical axis is 100 homicides per 100,000—one-third that of figure 3–9 and one-tenth that of figure 3–8.) As with males in these cities, the highest victimization rates occurred in the 18- to 24-year-old age group. Rates

for black females 18 to 24 years of age were generally 50 per 100,000 or less—although rates spiked to 75 per 100,000 in Washington, D.C., in 1990, 68 and 70 per 100,000 in Tampa in 1985 and 1986, and 83 per 100,000 in Richmond in 1994. Three cities showed clear increases in victimization rates for this group between 1985 and 1994—New Orleans, Richmond, and Indianapolis, all cities with overall increasing homicide victimization rates. Three other cities—Washington, D.C., Atlanta, and Detroit—experienced increasing rates during the early part of the study period followed by decreasing victimization rates—patterns that were again consistent with the overall homicide victimization trends in these cities. Tampa was the only city to show a substantial decline in the homicide victimization rates of black females ages 18 to 24, but this decline should be considered cautiously because of the relatively few numbers of homicides in Tampa.

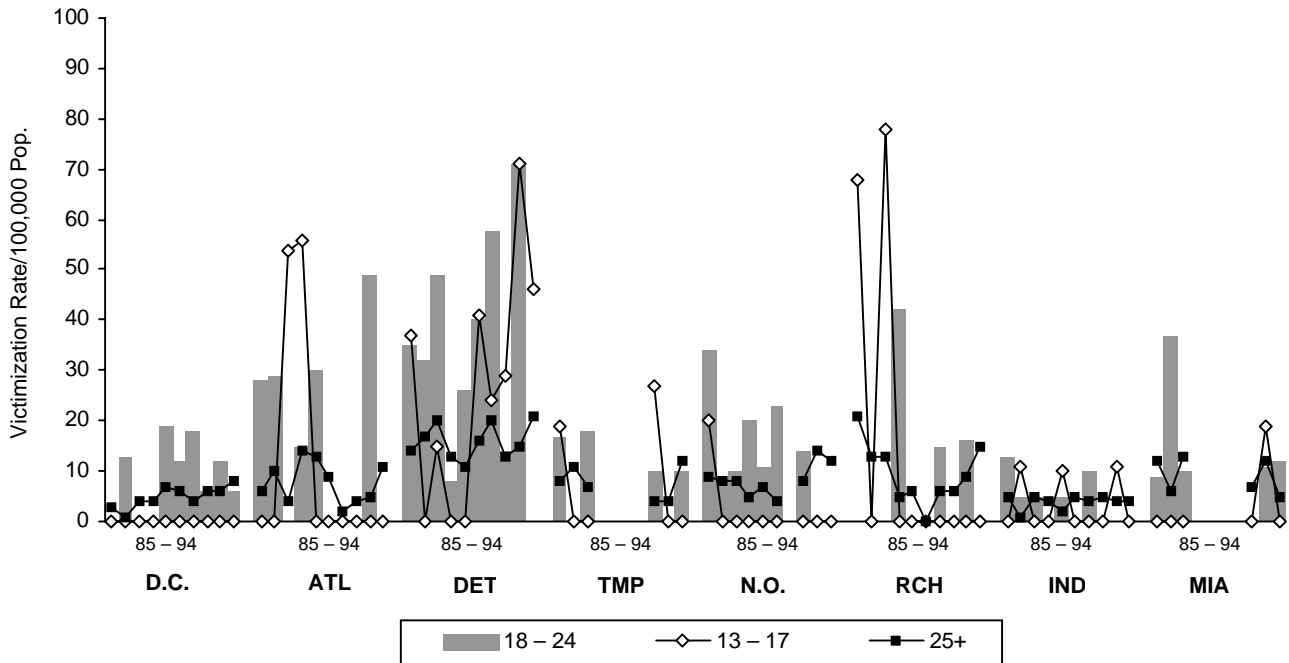
As can be seen by comparing figure 3–10 with figure 3–9, black females ages 18 to 24 suffered homicide

Figure 3–10. Black Female Homicide Victimization Rates, by Age, 1985–1994



Note: The scale used differs from figure 3–8 and 3–9; missing data for New Orleans, 1991, and Miami and Tampa, 1988–1991.

Figure 3–11. White Female Homicide Victimization Rates, by Age, 1985–1994



Note: Like figure 3–10, the scale used differs from figures 3–8 and 3–9; missing data for New Orleans, 1991, and Miami and Tampa, 1988–1991.

rates roughly comparable to those experienced by white males ages 18 to 24—in all cities except Detroit—and far below those experienced by black males of the same age (compare figure 3–8). The trends in victimization rates among older black females were comparable to those among 18- to 24-year-olds, albeit at a lower level. Finally, rates for 13- to 17-year-old black females were relatively low in general across these cities and this time period. The exception is Detroit, where rates for this youngest group peaked at 30 homicides per 100,000 in 1987. (The number of victims was five or less—usually one or two—in Richmond, Indianapolis, and Miami and, thus, the apparent increases are somewhat misleading.)

Figure 3–11 shows the trends for homicide victimization rates for white females. These trendlines represent the smallest numbers of homicides of the groups examined. In 1985, the eight cities experienced 82 homicides of white females; by 1994, that number fell to 58. Consistent with the other race/gender groups, the middle age group (18 to 24) experienced the highest victimization rates overall. Atlanta and De-

troit were the only cities with victimization rates consistently above 20 per 100,000. Homicides of 13- to 17-year-olds were even rarer among white girls than among white boys—Detroit showed higher rates than the other cities as well as an apparent increasing trend in the victimization rates of this youngest group. Finally, victimization rates for white women 25 and older were generally 10 per 100,000 or less—although, again, Detroit’s rate was higher, approaching 20 per 100,000.

Disproportionate Homicide Victimization

The previous section demonstrated that black males—particularly young black males—experienced considerably more homicides and higher homicide victimization rates than the other race/gender groups. The calculation of victimization rates controlled for population size, allowing comparison among cities or groups. This section further examines the extent to which black males were disproportionately represented among the cities’ homicide victims. The

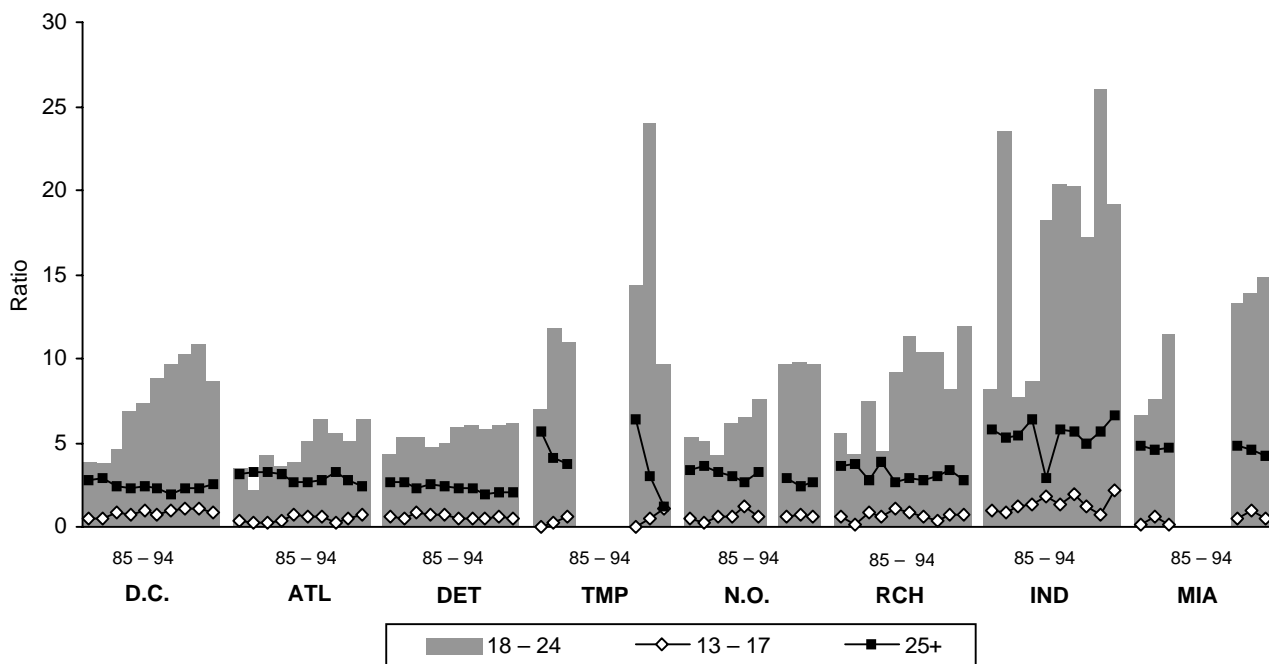
disproportionality ratio for each group equals the proportion of homicides among that group divided by that group's proportion of the overall population. This ratio equals "one" if the fraction of total homicides experienced by the group equals the fraction the group represents in the total population—for example, if a group suffered 10 percent of a city's homicides and made up 10 percent of the city's population, the ratio would be 1.0. To the extent that the ratio diverges from 1.0, there is disproportionate homicide victimization—values greater than 1.0 represent overrepresentation among victims in comparison with population, values less than 1.0 signal underrepresentation.

Figure 3–12 shows this ratio, over time and for each city, for three age groups of black males (13 to 17, 18 to 24, and 25 and over). In all cities and for all years, black males 18 and older were overrepresented among homicide victims in comparison with their representation in the population. In most cities, this overrepresentation was most extreme for black males ages 18 to 24, for whom the ratio typically ranged from 5 to 10 and occasionally exceeded 20. Further,

this age group was the only one of the three to show increases in the disproportionality ratio over the study period in all cities. Older black males (25 and older) were typically represented in homicide victimization at two to three times the rate they were represented in the population. In cities where blacks were not in the majority (Tampa, Indianapolis, and Miami), the disproportionality for black males age 25 and over was larger. Note, however, that in contrast to the 18- to 24-year-old group, there was little variation over time in the ratio for black males 25 years and older. The ratio values for black youths were generally below 1.0 for most cities and years, with the highest value (2.14) observed in Indianapolis in 1994. Only two other cities had peak ratio values greater than 1.0 for this age/race group—Washington, D.C. (1.08 in 1993) and Tampa (1.03 in 1994).

The numbers behind some of the most extreme instances of disproportionate victimization show, for example, that in Tampa in 1993, black males ages 18 to 24 were victims of 28 percent of the homicides (12 of 43) though they were only 1.2 percent of the

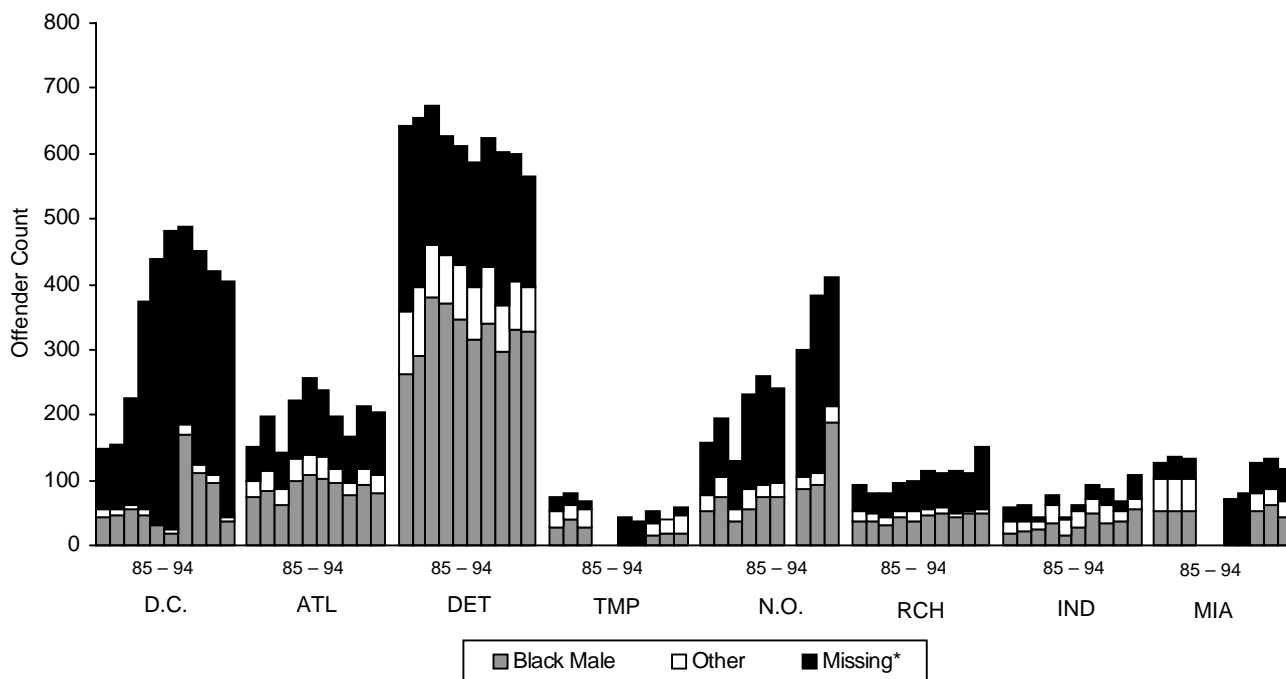
Figure 3–12. Disproportionate Homicide Victimization of Black Males, 1985–1994*



*The chart depicts the ratio of homicide proportion (black male homicide victimization to total homicides) and population proportion (proportion of black males in the city's population), by age groups.

Note: Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

Figure 3–13. Homicide Arrests of Black Males Compared With Total Homicide Arrests, 1985–1994



*Missing refers to known homicides for which arrest data were not available in the SHR.

Note: Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

population (3,284 of 282,563). These figures result in a ratio of 24—members of this group were 24 times as likely to be murdered as they should have been based only on their population size, if homicides had been proportionally distributed. Similarly, in Indianapolis in 1993, black males ages 18 to 24 suffered 26 percent of the homicides (18 of 69) though they were only 1 percent of the population (4,981 of 497,658), for a ratio of 26. Both these instances are based on relatively small numbers of homicides, but in Washington, D.C., in 1993, black males ages 18 to 24 were 33 percent of the homicide victims (138 of 423) and only 3 percent of the population (18,058 of 597,470), resulting in a ratio of 11. While reflecting the same victimization and population data presented earlier, these disproportionality ratios bring into sharp focus the magnitude of the homicide threat faced by young black males in these cities.

What figure 3–12 does not show is that groups other than black males were, in turn, mostly disproportion-

ately *less* likely to be murdered than one would expect based on overall homicide rates and the proportion of the population they made up. Thus, for example, consider the disproportionality ratios for the next most prevalent age/race/gender homicide victims groups (data not shown). The ratios for 18- to 24-year-old white males in Washington, D.C., Atlanta, New Orleans, and Richmond were generally well below 1.0 throughout the study period. Detroit was an exception—the ratio for 18- to 24-year-old white males in Detroit was 1.2 in 1985 and climbed to 4.9 by 1994. Miami also experienced ratios for this group above the 1.0 level—1.4 in 1985, climbing to 2.4 in 1993 before declining to 1.7 in 1994. Ratios for this population group in Tampa and Indianapolis fluctuated throughout the period but generally reflected only one or two homicides a year. Similarly, for 18- to 24-year-old black females, the ratios were generally below 1.0 throughout the study period for most cities—exceptions were Tampa and Indianapolis, which experienced victimization ratios as high as 2.7.

Homicide Arrests and Homicide Arrest Rates

This section presents information from the FBI's Supplemental Homicide Reports (SHR) on the characteristics of those arrested for homicide incidents. These data necessarily are less complete than those that describe victim characteristics, because the availability of data requires both that an arrest was made prior to submission of the data and that the arresting agency chose to report the data. Thus, information depends on an agency's clearance rate, the timing of the arrest, and the agency's reporting practices.

Figure 3–13 shows the distribution of homicide arrests by city and year; separate counts are shown for black males, others (all other males, all females), and missing (no arrest data for a known homicide). The prevalence of missing information is immediately obvious, as is the large fraction of all arrests that are of black males. When information is known, the most likely arrestee is a black male. This finding is consistent with the hypothesis that homicides are more likely to occur within demographic groups, as victims are also likely to be black males. Overall, cities with fewer homicides have more complete data. Information is missing in more than 50 percent of the incidents for Washington, D.C., and New Orleans throughout the study period and for Richmond for most of the later study years. In fact, for Washington, D.C., there is so much missing data for arrests that any conclusions must be very tentative.

In Detroit, as the number of homicides fell slowly, so for the most part did the number of homicides with no arrest data. Again, black males accounted for most of the homicide arrests, with those ages 18 to 24 being a relatively large portion of those arrested. Arrests of black males age 25 and over decreased gradually from 1988 on; arrests of black males age 17 and under grew in 1993 and 1994. Tampa had relatively few homicides with no arrest data, which was probably a function of the relatively small number of homicides in that city. The number of black males arrested for homicide decreased sharply from 1986 to 1987, and was fairly stable from 1992 through 1994 (Tampa has

no SHR data for 1988 through 1991). The number of white males arrested for homicide in Tampa increased between 1993 and 1994.

In New Orleans and Richmond, the number of homicides with no arrest data rose along with the number of homicides, though this trend was overcome somewhat in New Orleans in 1994. Black males accounted for the great majority of homicides with arrest information. In New Orleans, twice as many black males age 17 and under were arrested for homicide in 1994 as in 1993. In Richmond, black males ages 18 to 24 accounted for a large share of homicide arrests for which there were data, although they comprised a small fraction of the population. Indianapolis and Miami had relatively few homicides without arrest data. In Indianapolis, the increase in homicides from 1989 through 1991 was accompanied by an increase in arrests of black males of all age groups as well as by an increase in homicides with no arrest data. Arrest trends in Miami remained relatively stable, mirroring the overall homicide trend.

In most of the eight cities, it appears that homicide arrestees were drawn from the same groups as homicide victims (though the many homicides for which no arrest data are available cloud this conclusion). In Tampa and Miami from 1985 through 1987, black males typically made up fewer than half of homicide victims but more than half of homicide arrestees; from 1992 through 1994, this relationship no longer held in Tampa but continued in Miami, perhaps slightly more so. In Indianapolis, black males made up a large part of homicide victims and arrestees, though they made up a small part of the population.

Figures 3–14 through 3–17 show homicide arrest rates per 100,000 population for black males, white males, black females, and white females, respectively. As with the charts for homicide victimization rates, different scales are used for males and females. Figure 3–14 shows that arrest rates for black males ages 18 to 24 reached levels similar to those of homicide victimization rates for this group. Thus, for example, arrest rates increased between 1985 and 1994 for black males ages 18 to 24 in six of the eight cities. Only Tampa and Miami showed declines in arrest rates for this group. In New Orleans, Rich-

mond, and Indianapolis, in particular, the arrest rates increased dramatically—from 102 to 388 per 100,000 in New Orleans, 258 to 590 per 100,000 in Richmond, and 84 to 720 per 100,000 in Indianapolis.

Figure 3–14 also shows that arrest rates were generally higher for the 13- to 17-year-old age group than for the 25+ age group. This finding contrasts with victimization rates (figure 3–8), which generally were higher for the 25+ age group than for the youngest group.

Figure 3–15 presents the homicide arrest rates for white males by age. The arrest rates are again comparable to the homicide victimization rates for these groups, in the 30 to 50 per 100,000 range for most cities and years. The most striking exception to this range is Detroit, where arrest rates for white males ages 18 to 24 were 364 per 100,000 in 1993. Detroit also experienced relatively high arrest rates for white youths (ages 13 to 17)—with rates approaching 200 per 100,000 in the early 1990s.

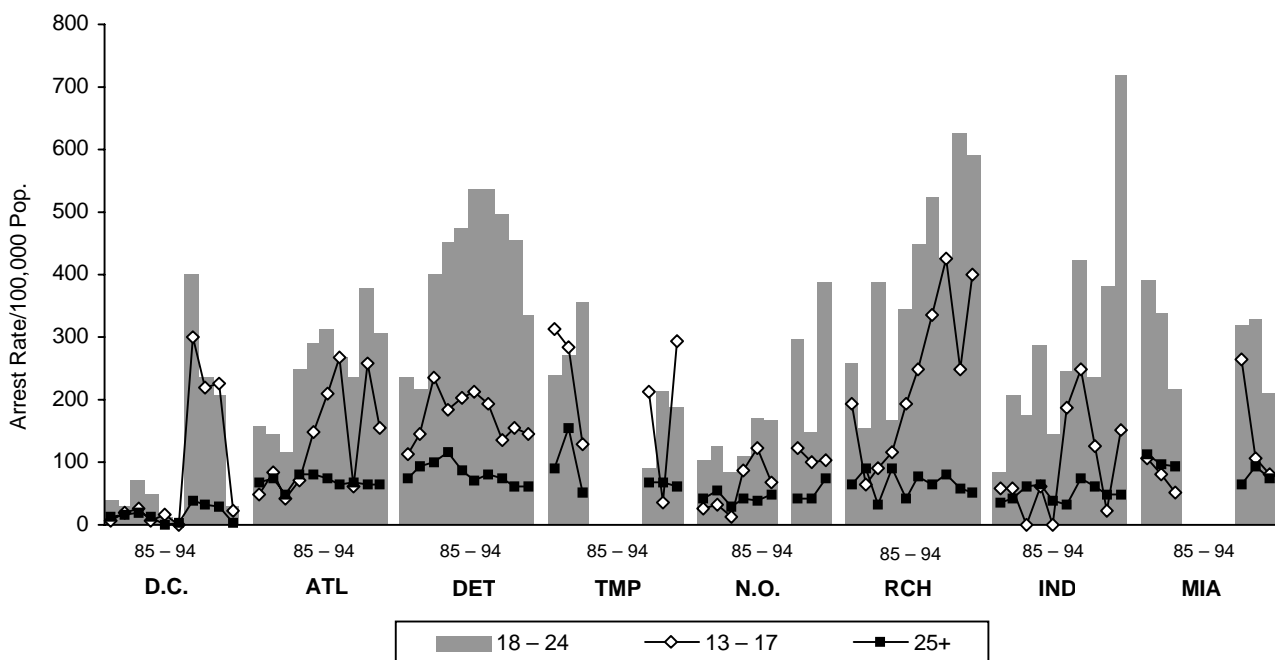
Figures 3–16 and 3–17 present arrest rate information for black and white females, respectively. In many

cases, the arrest rates for black females are comparable to those of white males of similar age—for example, in the 30 to 50 per 100,000 range for 18- to 24-year-olds. The highest rates for this group were observed in Tampa, but the numbers totaled fewer than five arrests per year. Rates for the youngest females were very low—seldom rising above zero. Figure 3–17 shows the arrest rates for white females by age group. Detroit was the only city to consistently experience nonzero arrest rates for white females—and these higher rates were for all age groups.

Similarity of Homicide Victims and Offenders

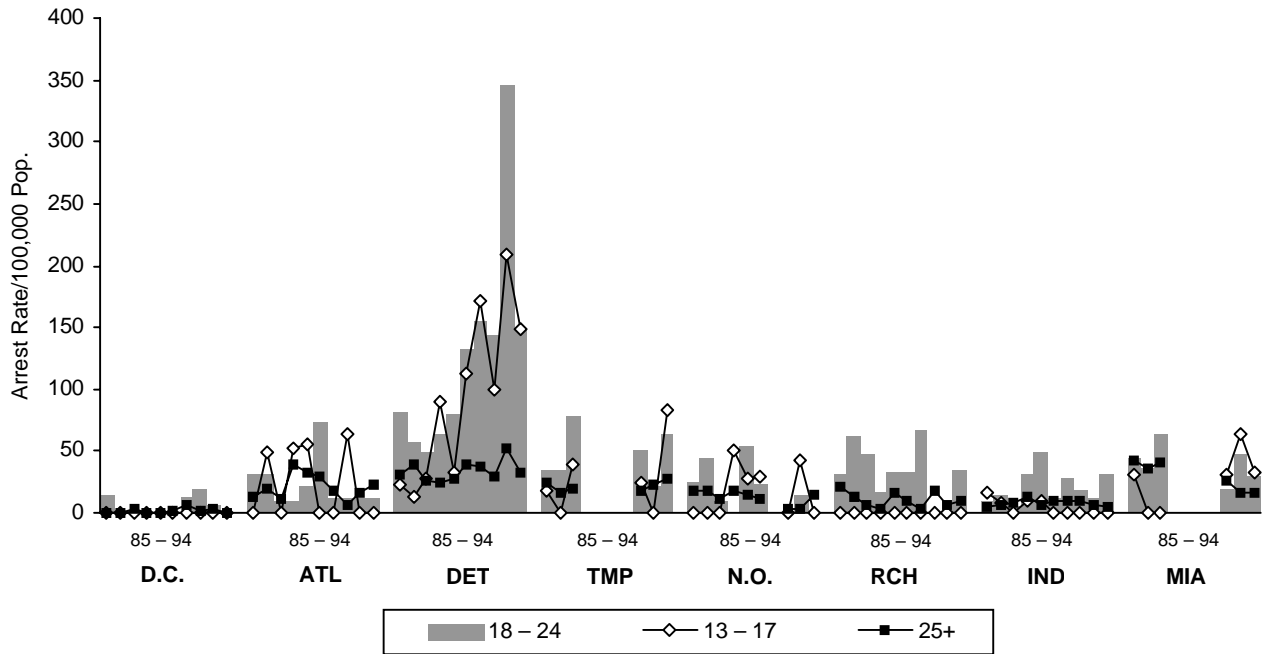
This section examines further the extent to which victims and offenders share similar demographic characteristics. These analyses are based on the conjunction of victim and offender characteristics, in particular age, race, and gender. Victim/offender relationships (e.g., spouse) are addressed in a subsequent section on domestic violence. Because these

Figure 3–14. Homicide Arrest Rates for Black Males, by Age, 1985–1994



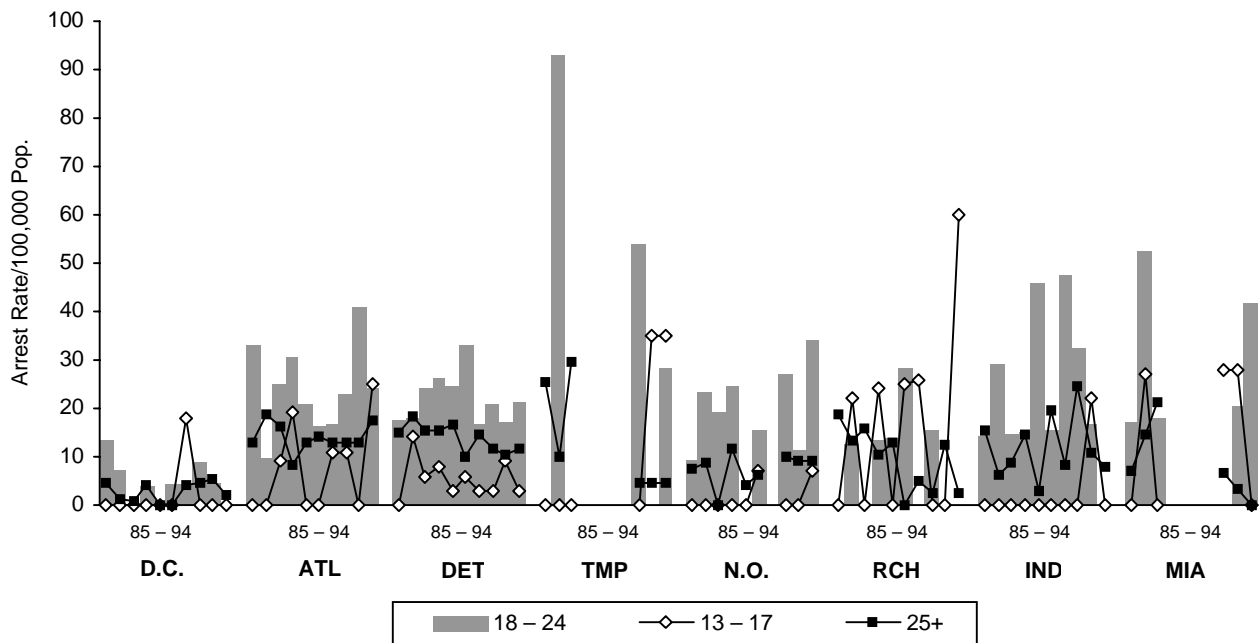
Note: Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

Figure 3–15. Homicide Arrest Rates for White Males, by Age, 1985–1994



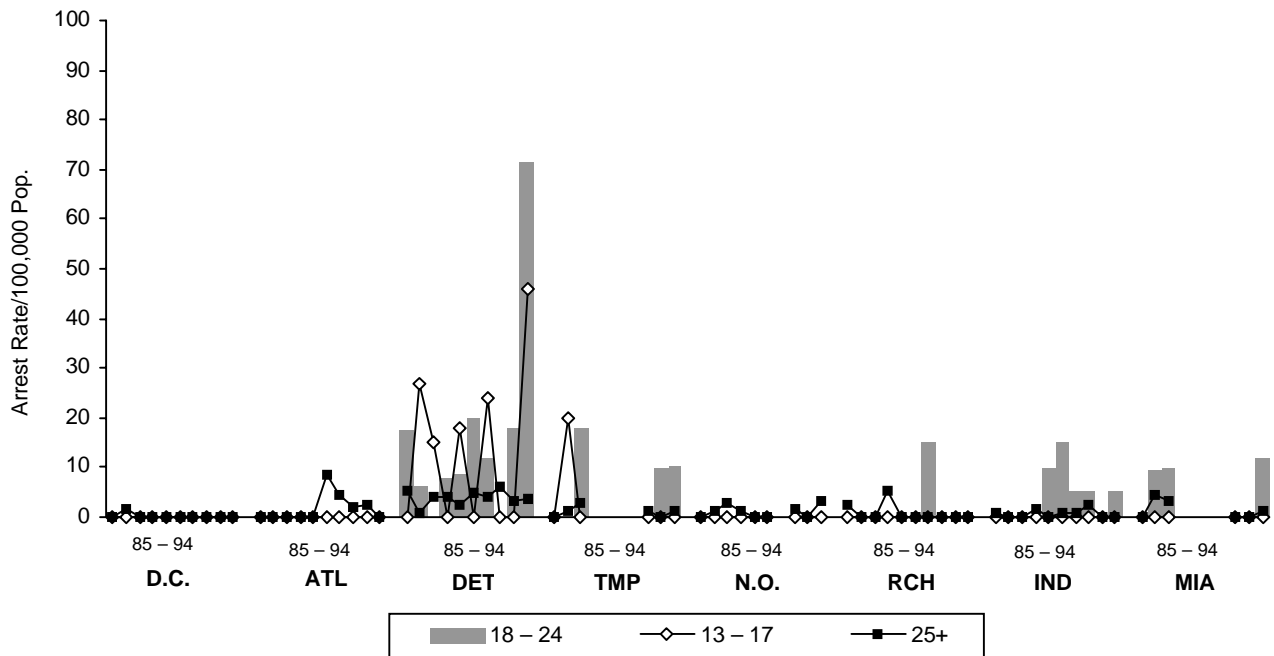
Note: Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

Figure 3–16. Homicide Arrest Rates for Black Females, by Age, 1985–1994



Note: The scale used differs from figures 3–14 and 3–15; missing data for New Orleans, 1991, and Miami and Tampa, 1988–1991.

Figure 3–17. Homicide Arrest Rates for White Females, by Age, 1985–1994



Note: Like figure 3–16, the scale used differs from figures 3–14 and 3–15; missing data for New Orleans, 1991, and Miami and Tampa, 1988–1991.

analyses use data from the Supplemental Homicide Reports, all the caveats and limitations described above pertain here as well. Most importantly, the offender data are limited to cases in which an arrest was made and the data reported and, thus, are missing for many cases.

Earlier, victimization and arrest counts and rates for various age groups were described. Although 18- to 24-year-olds were the most likely victims and arrestees, it is not clear that offenders necessarily are killing victims roughly of the same age. Additionally, given current interest in juvenile violence, has there been a tendency toward younger victims and offenders?

In the initial analysis, the study period and data were divided into three sections (1985–1987, 1988–1991, and 1992–1994). A regression of victim age on offender age was then calculated for each set of data. (Cases where the victim or offender was below age 13 were censored.) Results in table 3–2 show the intercepts and slopes of the regression equation and the predicted age of the victim of a 20-year-old offender.

The slopes ranged from 0.26 to 0.58 and were typically between 0.30 and 0.46, excluding Washington, D.C., for which there are so many missing cases that the data cannot be interpreted with any confidence. For available cases in these cities, homicide offenders tended to be younger than their victims, though the age difference varied among cities and, to a lesser extent, over time. In Atlanta in 1985–1987, for instance, the “typical” 20-year-old arrested for homicide murdered a victim 28.6 years old; in 1992–1994, the “typical” 20-year-old Atlantan arrestee killed a victim 27.6 years old. By contrast, in Miami in 1985–1987, the typical 20-year-old murderer killed a victim 32.3 years old. There was relatively little difference in the three models for most cities—only the models for Indianapolis and Richmond suggest that the average victim of a 20-year-old murderer became substantially younger over the study period.

Convergence of victim age and offender age does not fully address the relationship of victim and offender ages. Another issue is whether younger offenders were murdering younger victims. Each victim-

Table 3–2. Regression Results of Victim/Offender Age

City	Intercept (β_0)			Slope (β_1)			Expected Age of Victim of 20-Year-Old Arrestee		
	1985–87	1988–91	1992–94	1985–87	1988–91	1992–94	1985–87	1988–91	1992–94
Washington, D.C.	12.5	15.3	16.7	0.67	0.59	0.57	26	27	28
Atlanta	20.2	21.4	16.0	0.42	0.39	0.58	28	29	28
Detroit	22.3	22.9	20.2	0.32	0.30	0.38	28	29	28
Indianapolis	22.0	18.5	20.6	0.36	0.45	0.34	29	27	26
Miami	26.9	--	25.4	0.27	--	0.26	32	--	30
New Orleans	16.7	18.5	19.0	0.50	0.46	0.42	27	28	27
Richmond	25.1	18.1	17.6	0.35	0.43	0.51	32	26	27
Tampa	23.1	--	22.3	0.41	--	0.38	31	--	30

offender pair for which ages were known was placed into one cell in the following grid:

Victim Age	Offender Age		
	0–17	18–24	25+
0–17			
18–24			
25+			

Table 3–3 summarizes the totals across years for each city. Cells in which victims and offenders shared the same age group are shaded. As can be seen, victims and offenders were likely to share the same age group. Despite concerns about youth violence, the most likely victim/offender age combination for these eight cities was 25+/25+; this group, however, includes many more years than the other two groups.

In most cities, there were few changes over time in the number of homicides falling into each victim/offender age combination (data not shown). In Atlanta, the victim:25+/offender:25+ remained the predominant combination, with slight variations among the other combinations. The same pattern held

for Detroit, though the three combinations involving 18- to 24-year-old offenders (victim:25+/offender:18–24, victim:18–24/offender:18–24, and victim:0–17/offender:18–24) were more prevalent. In New Orleans and Richmond, the rising overall homicide count was accompanied by rising numbers of cases for which offender age data are missing, making interpretation difficult. Based on the available data, New Orleans and Richmond differed in terms of victim/offender age combinations. In New Orleans, the proportion of homicides falling into each age combination was quite steady over the years, until the victim:25+/offender:25+ and the victim:25+/offender:18–24 combinations increased from 1993 to 1994. In Richmond, the prevalence of various combinations changed substantially across years, particularly for the victim:18–24/offender:18–24 combination. By 1993, the victim:25+/offender:25+ combination was relatively uncommon in Richmond in light of the size of the population 25 and over. Indianapolis also witnessed volatility among the prevalence of various combinations, with the victim:25+/offender:18–24 combination becoming more common following 1987; the victim:18–24/offender:25+ combination unusually prevalent in 1992; and the victim:25+/offender:25+ combination becoming relatively uncommon in 1993 and 1994.

Table 3–3. Homicide Victim/Offender Age Relationships (data are missing for many incidents)

City	Victim Age	Offender Age		
		0–17	18–24	25+
Washington, D.C.	0–17	22	29	22
	18–24	25	95	45
	25+	44	99	182
Atlanta	0–17	32	35	32
	18–24	28	119	78
	25+	43	176	580
Detroit	0–17	122	189	143
	18–24	146	534	380
	25+	168	648	1,504
Tampa	0–17	3	4	6
	18–24	8	33	6
	25+	14	38	171
New Orleans	0–17	44	38	21
	18–24	25	112	69
	25+	19	122	352
Richmond	0–17	19	19	8
	18–24	21	87	42
	25+	35	92	203
Indianapolis	0–17	12	25	15
	18–24	8	68	58
	25+	17	84	204
Miami	0–17	8	12	13
	18–24	14	45	42
	25+	20	55	244

Of special interest is the extent to which young offenders (age 17 and under) murdered victims in various age categories. Overall, young offenders killed older victims (ages 18 to 24 or age 25 and over) more than victims in their own age group, but murders by young offenders still made up a small portion of murders. In New Orleans, half of the few murders committed by young offenders were within their own age group.

The researchers also looked at the conjunction of victim and offender race and gender. Of special interest is black-on-black homicide, particularly among black males—driven by the observed homicide victimization and arrest levels for black males discussed earlier. Table 3–4 summarizes the victim race/gender categorization for each city. As before, missing data for Washington, D.C., Tampa, and Miami render discussion of the results for these cities problematic.

With few exceptions, murders of black males by black males were predominant, often outnumbering murders in the other three categories combined. In Atlanta and Detroit, the relative prevalence of black-male-on-black-male homicides remained stable across the years (data not shown). In New Orleans, this was mostly the case until 1994, when homicides committed by black males against black males and others increased drastically. This increase accompanied a drop in the number of cases with missing data and an increase in overall homicides. In Richmond, black-male-on-black-male homicide increased gradually from 1987 through 1993 but decreased in 1994; this decrease, however, may be related to a marked increase in the number of cases with missing data in 1994. In Indianapolis, the number of black-male-on-black-male homicides fluctuated throughout the study timeframe, peaking in 1991. This category of homicide was usually the most common in Indianapolis and occasionally exceeded the other three categories combined. This is noteworthy in light of the relatively small portion of the population black males make up in Indianapolis.

It is difficult to correlate the prevalence of black-male-on-black-male homicides with the overall homicide trends for the eight cities, due in part to missing data concerning offenders. In Atlanta, the peak in homicides in 1988–1990 occurred among all four race/gender combinations. In Detroit, it appears that the decrease in overall homicides since 1988 was due primarily to a decrease in black-male-on-black-male homicides, though this remained the predominant category. In New Orleans and Richmond, the increase in cases with missing data overwhelmed the trends for black-male-on-black-male homicide. In Indianapolis, the spike in homicides in 1988 occurred

Table 3–4. Homicide Victim/Offender Race/Gender Combinations

City	Victim Race/Gender	Offender Race/Gender	
		Black Male	Other
Washington, D.C.	Black Male	503	70
	Other	151	25
Atlanta	Black Male	644	179
	Other	220	98
Detroit	Black Male	2,473	453
	Other	784	361
Tampa	Black Male	88	44
	Other	58	100
New Orleans	Black Male	532	112
	Other	195	91
Richmond	Black Male	317	50
	Other	101	49
Indianapolis	Black Male	231	62
	Other	84	142
Miami	Black Male	218	48
	Other	98	174

in both black-male-on-black-male homicides and other-on-other homicides. The peak in 1991 occurred primarily in black-male-on-black-male homicides, though the number of cases with missing data also increased, making conclusions tenuous.

Circumstances of Homicides

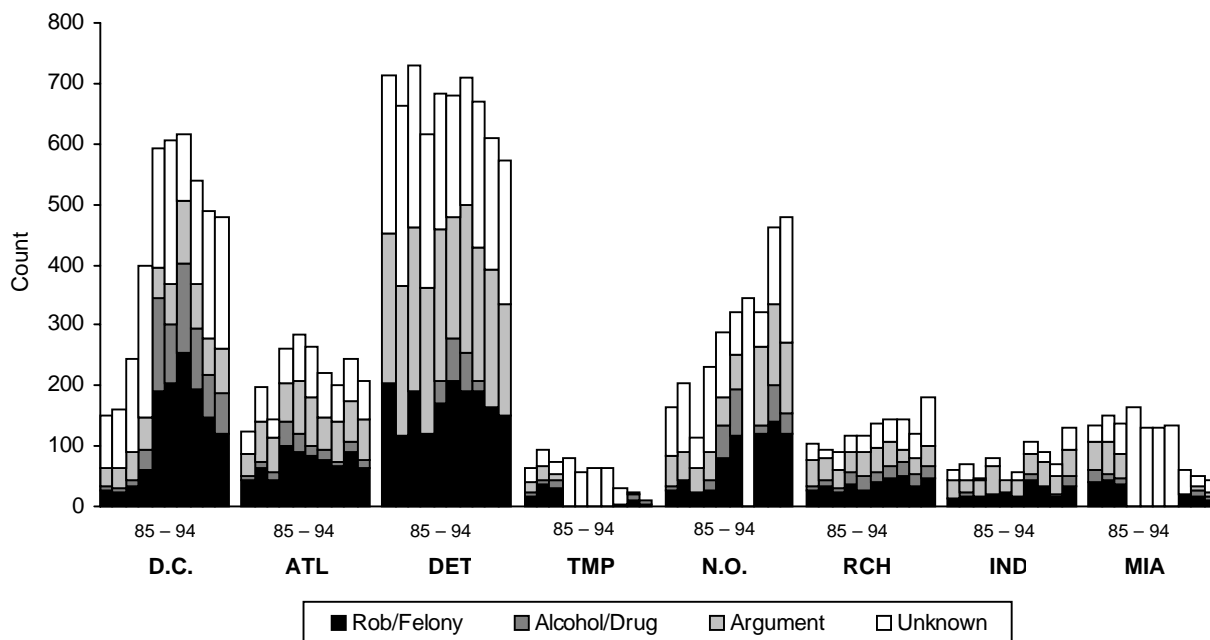
The Supplemental Homicide Reports also provide information on the circumstances of each homicide—whether the homicide was committed in connection with a robbery or felony, was related to alcohol or drugs, was related to gangs, was related to an argument, or was of unknown circumstance. Use of this classification scheme varies across cities and possibly over time or among coders within a given city, so the data should not be seen as an unfiltered representation of the truth. For example, a later chapter describes the restrictions in classifying homicides as drug-related. Nonetheless, the data provide information on homicides that is not readily available elsewhere.

Figure 3–18 shows that the proportion of homicides classified as falling under the various circumstances differs substantially across cities and over time. In Washington, D.C., the large increase in homicides in the late 1980s and the smaller decline in the early 1990s occurred primarily among homicides related to felonies and to alcohol or drugs, though homicides of unknown circumstances also increased, especially in 1993 and 1994. In Atlanta, the proportion of homicides in each set of circumstances remained more or less constant over the years, with homicides in each set of circumstances rising or falling in concert with the overall homicide trend. In Detroit, the situation was similar, except that homicides related to alcohol or drugs increased in the late 1980s and very early 1990s, then decreased to very low levels. In Tampa, homicides in each of the known sets of circumstances were sharply lower in 1992 than in 1988, but data are missing for the intervening years. Between 1992 and 1994, homicides related to alcohol or drugs accounted for a large portion of the few homicides Tampa experienced.

The large increase in homicides in New Orleans involved homicides related to felonies, alcohol or drugs, and arguments; from 1993 to 1994, the number of homicides of unknown circumstances increased sharply. In Richmond, homicides related to felonies and to alcohol or drugs increased gradually (for the most part) from 1987 through 1992. As in New Orleans, in Richmond, the number of homicides of unknown circumstances increased sharply between 1993 and 1994. In Indianapolis, the spike in homicides in 1991 was largely due to homicides related to robberies and other felonies; the spike in 1994 was due more to homicides related to felonies, homicides related to alcohol or drugs, or homicides of unknown circumstances. In addition to the differences in circumstances across cities and over time, these SHR data show very few homicides in any of the eight study cities that were classified as related to gangs. This topic will be explored further in the section on guns, drugs, and gangs.

The next chapter begins the examination of factors that may help account for the observed homicide trends. Other dimensions along which homicides can be differentiated are addressed in other sections of

Figure 3–18. Circumstances Surrounding Homicides, 1985–1994



Note: Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

this report. Victim/offender relationships are discussed in the section on domestic violence, with particular focus on intimate/family homicides. The types of weapons used are discussed in the section on guns, drugs, and gangs.

Notes

1. See Chilton, Roland, “Homicide Arrest Trends and the Impact of Demographic Changes on a Set of U.S. Central Cities,” in *Trends, Risks, and Interventions in Lethal Violence: Proceedings of the Third Annual Spring Symposium of the Homicide Research Working Group*, NIJ Research Report, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1995, NCJ 154254, for an examination of the extent to which changes in population account for changes in the homicide rate.
2. Homicide victimization data are considered among the most complete and accurate in the crime and justice field, although there are still shortcomings.

Homicide arrest data, however, are far less complete because they depend upon an arrest being made (which may be only a matter of days or many years after the homicide) and records being updated. Both victimization and arrest data are influenced by variations in coding practices across cities and over time, though the Federal Bureau of Investigation provides police departments with a coding guide, the *Uniform Crime Reporting Handbook*.

3. A more precise calculation uses each year’s rate and takes into consideration that the individual survived the previous year(s). The result is the same (to three decimal places), since the rates are cumulated over only 6 years. See, for example, Barnett, A., E. Essensfeld, and D.J. Kleitman, “Urban Homicide: Some Recent Developments,” *Journal of Criminal Justice*, 8(1980):379–385, for more detailed discussion of cumulating risk of homicide victimization.
4. The annual number of homicides among 13- to 17-year-old black males ranged from 0 to 3 in Tampa and from 1 to 6 in Miami between 1985 and 1994.

The Macro Domain: Environmental Context and Homicides

In an effort to understand and explain factors affecting homicide in the eight selected cities, the project team examined the context in which the homicides occurred. These inquiries into context focused on economic factors and systems and resources believed to be closely linked to homicide and other violent crime, such as emergency medical services, domestic violence programs, and public housing. The team examined differences among the cities and changes during the time of interest (1985–1994) and assessed the extent to which these differences and changes corresponded to and appeared to account for the observed homicide trends. Though general hypotheses were being tested, this study was nonetheless exploratory in nature in that learning about the areas of interest could perhaps generate more specific, focused hypotheses for future inquiry.

Throughout this report, much of the focus is on differences between genders and among ages and racial groups, for reasons both substantive and practical. At a substantive level, this study—like many studies—has found males, blacks, and adolescents and young adults to be more involved in homicide and other violent crime as both victims and perpetrators than their counterparts. Therefore, it is important to examine the extent to which these differences applied to the eight cities during the years of interest. At a practical level, data on these characteristics are, for the most part, available. The importance of this point should not be overlooked. If data were available on other aspects of homicide victims and perpetrators—such as their socioeconomic status—they would

have been included in the study because they would likely speak more directly to the hypotheses than do the factors for which data are available. The focus on gender, age, and race should not be seen as implying a *causal* relationship between these factors and homicide victimization or perpetration. Rather, these factors are related to and reflect other constructs for which data are not available. The researchers strenuously urge that this point be taken into consideration and, moreover, that this approach and resulting findings in no way be interpreted as blaming the victims.

The project team conducted onsite semistructured interviews using protocols tailored to each topic area. Interviewees included representatives—typically officials—from domestic violence programs, emergency medical services (EMS), public housing and public housing security, and public schools and school security. The team interviewed persons knowledgeable about demographic and economic changes, including city officials and researchers in economics, demographics, and criminal justice/criminology. Interviewees were asked specific questions about changes they had discerned in the area of interest and their views concerning links between these changes and changes in the homicide rate. A variety of existing data, as described in following sections, also was used.

The researchers attempted to address the effect of prevention, particularly violence prevention programs. However, the brief time onsite precluded

learning about prevention and its effects. The team was not able to identify and learn about the prevention efforts in the eight cities, much less address their efficacy. Therefore, prevention programs are not discussed at any great length, other than in relation to specific topics such as domestic violence. The lack of a discussion on prevention programs as a possible influence on homicide rates should not be seen as criticizing or discounting prevention efforts.

Economic and Related Factors

Economic conditions have long been considered an important influence on crime, though the specific factors and mechanisms are disputed.¹

Interviewees tended to discuss economic changes in their cities in terms of broad indicators such as per capita income, employment, and households living under the poverty line. Changes in economic well-being reported by interviewees varied substantially across cities. Tampa saw a boost in its economy from 1985 to 1994, while others experienced declines or relative stability.

Interviewee perceptions concerning the importance of economic factors as an influence on homicide rates varied greatly. In Tampa, a belief that positive economic changes could lead to decreased violence and homicide was supported by the improved economy and reduced homicide rate. In New Orleans, by contrast, economic trends and the homicide rate appeared unrelated; one interviewee believed that economic factors are not a very important influence on homicide and violence. In other cities, interviewee perceptions of the relationship between the economy and homicide did not correspond to the actual trends.

The qualitative information from interviews was augmented by conducting quantitative analyses of changes in economic factors. Though the sample size of eight cities was inadequate for rigorous statistical analysis of the relationship between changes in economic factors and homicide rates, an examination of changes in key economic indicators and other related factors was enlightening, particularly in conjunction with the interview responses.

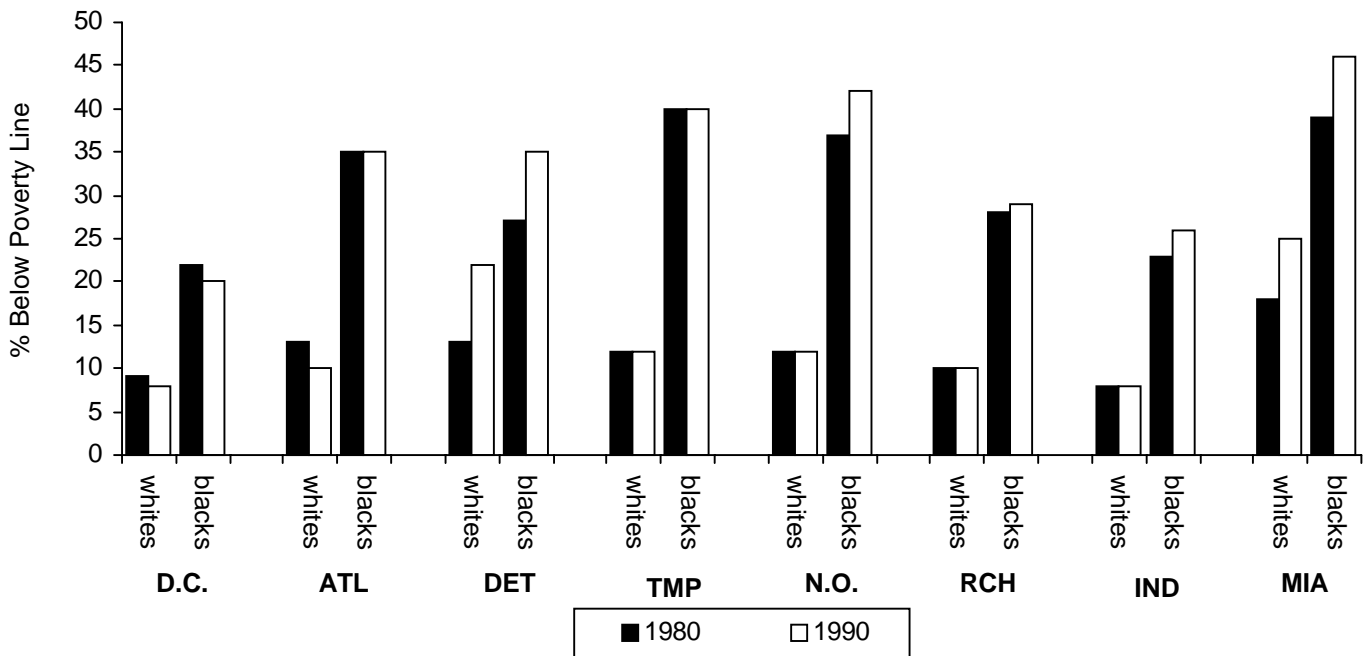
These analyses treat the city as the unit of analysis and do not incorporate within-city variation in the economic factors in question. This approach is not optimally sensitive, and failure to detect links between homicide and selected economic factors should not be seen as evidence that the links do not exist. In fact, preliminary analyses of within-city variation in economic factors strongly suggest a link to homicide. NIJ staff are conducting research to better assess this relationship. (See Appendix 4–A for an example showing homicides and poverty levels in census tracts in Washington, D.C.)

Poverty

Figure 4–1 shows the percentage of whites and blacks whose income was below the poverty line, based on census data for 1980 and 1990, for each city.² (The following analyses focus on blacks and whites because of the small numbers of other races in most of the eight cities.) The most striking aspect of figure 4–1 is that in every city the percentage of blacks in poverty far exceeded the percentage of whites in poverty, although this is not a novel finding. In many cities, the 1980–1990 poverty changes were on roughly the same magnitude for blacks and whites. In New Orleans, Indianapolis, and, to a lesser extent, Richmond, the percentage of blacks in poverty increased between 1980 and 1990, while the percentage of whites in poverty remained constant. Each of these three cities showed either linear or quadratic increases in homicides from 1985 to 1994. Although no certain conclusions can be drawn from this rudimentary analysis, in these three cities it is plausible that increases in poverty among blacks may have contributed to increased homicides among them.

In the remaining five cities, there was no apparent relationship between homicide trends and the percentage of the population in poverty. Although the percentage of blacks in poverty worsened in the cities with increasing homicide trends, it also worsened—and to a greater extent—among blacks and whites in Detroit (where homicides decreased) and Miami (where homicides were stable). In Washington, D.C., and Atlanta, the cities with decreasing quadratic homicide trends, the percentage of people in poverty decreased slightly (though in Atlanta this was not true

Figure 4–1. Individuals Living Below Poverty, by Race,* in 1980 and 1990



*Poverty analyses are based on populations of blacks and whites, who together accounted for the majority of the population in the selected cities. **Source:** U.S. Bureau of the Census, 1980, 1990. The cities are abbreviated as follows: Washington, D.C. = D.C., Atlanta = ATL, Detroit = DET, Tampa = TMP, New Orleans = N.O., Richmond = RCH, Indianapolis = IND, Miami = MIA.

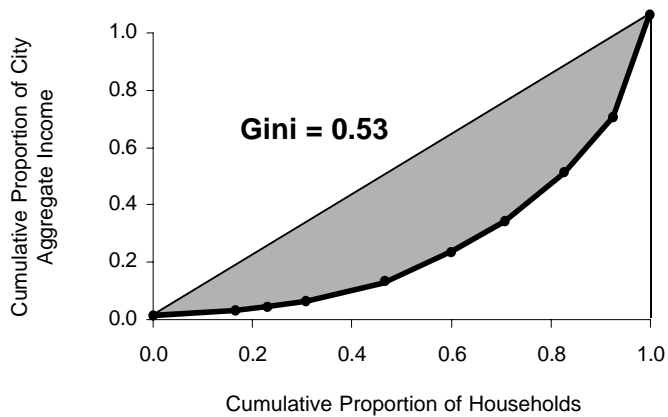
for blacks). However, in the census period ending in 1990, homicides were still increasing in Washington, D.C., and Atlanta. This sidenote highlights one problem with using poverty measures from the census: the latest census (in 1990) was in the middle of the timeframe of interest. This concern may be somewhat alleviated to the extent that one believes the influence of poverty is delayed. Nonetheless, a 5-year offset is probably more than is desirable.

Income Distribution

Each city's distribution of income, which has been shown to be related to homicide and other crime, was also examined. Census data provided the number of households in nine income categories.³ The aggregate income for each income category was estimated by multiplying the category midpoint by the number of households. (For the open-ended categories, the Pareto method was used to estimate the midpoint.) The project team calculated the cumulative percent of households across income categories and estimated the cumulative percent of income held by households in each income category, using aggregate income

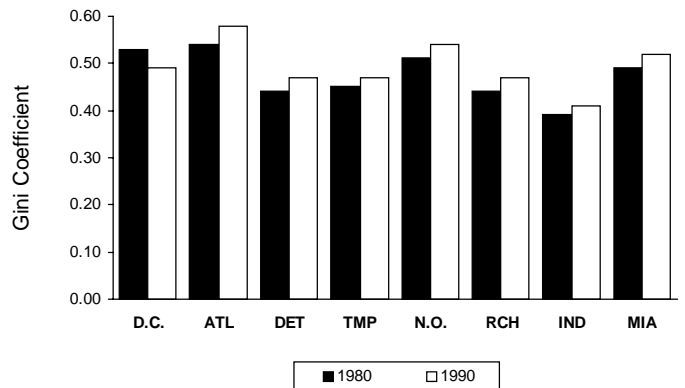
estimates. The team then calculated a Gini coefficient for each city to summarize the income distributions, based on the income distribution curve (Lorenz curve). As an example, figure 4–2 shows the Lorenz curve for Washington, D.C., for 1980: 23 percent of households at lower income levels earned just 3 percent of the city's aggregate income; the lowest 70 percent of households earned 31 percent of the aggregate income; and—by definition—the entire percent of households (100 percent) earned the entire percent of the aggregate income (100 percent). (The cumulative percent of households points do not fall at standard percentiles because they are based on the number of households in each income category, which varies by city.) The straight diagonal line represents perfect equality of distribution, i.e., any given percent of households earns exactly the corresponding percent of the city's aggregate income. The area between the diagonal line and the plotted curve reflects the divergence of the data from perfect equality. The Gini coefficient is the ratio of the size of this area relative to the entire area of the triangle. As the distribution of income becomes more equal, the area between the

Figure 4–2. Income Distribution for Washington, D.C., 1980



Source: U.S. Bureau of the Census, 1980.

Figure 4–3. Income Distribution Measured by Gini Coefficients, 1980 and 1990



Note: Gini coefficients reflect the extent to which income distribution diverges from equality. The larger the coefficient, the larger the disparity in income distribution.

Source: U.S. Bureau of the Census, 1980, 1990.

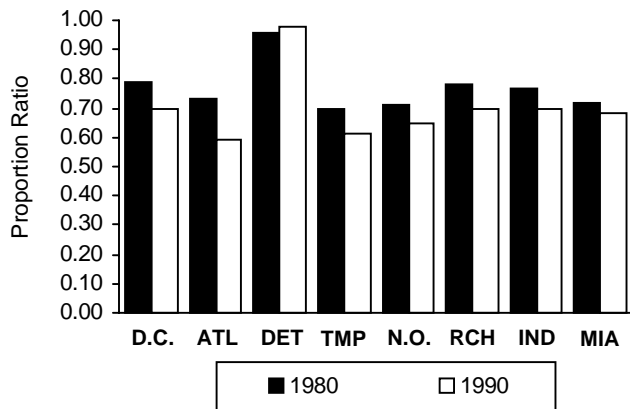
diagonal and the curve shrinks, and the Gini coefficient approaches zero. The Gini coefficient was calculated by (1) computing the area of each rectangle formed by the x values (based on the number of households in each income category) and the y value (based on the aggregate income for those households) at the midpoint between the x values; (2) totaling the nine rectangles to estimate the area under the curve; (3) subtracting the total from 0.5 (the area of the triangle) to obtain the area above the curve; and (4) calculating the ratio of the difference and 0.5.

The Gini coefficients reflect the extent to which the income distribution diverges from equality, resulting in larger coefficients. As the distribution of income becomes more equal, the Gini coefficient approaches zero. Figure 4–3 shows the Gini coefficients for each city for 1980 and 1990. For seven of the eight cities, the Gini coefficient increased from 1980 to 1990; that is, the income distribution departed further from equality. Only in Washington, D.C., did the income distribution move toward equality. The same type of change in Gini coefficients was seen in cities with different homicide rate trends, so changes in income distribution (as measured by Gini coefficients) did not help to explain changes in homicide trends. Gini coefficients (as distinct from change over time) also do not appear helpful in explaining homicide rates, as cities with similar Gini coefficients have different homicide rates and vice versa.

Gini coefficients describe the overall distribution of income and do not reflect distribution inequality among groups (e.g., genders or racial groups), which has been shown to be related to homicide.⁴ (Gini coefficients for each group of interest would reflect only the income distribution within that group, whereas the point of interest is the distribution of the group’s income relative to that of other groups.) Balkwell proposed a measure of ethnic inequality that incorporated the proportion of the community’s population represented by an ethnic group with the income proportion received by that group. Following the same logic used earlier in computing the disproportionate homicide victimization among black males relative to their representation in the population, the team calculated the ratio of the proportion of each city’s aggregate income earned by black households relative to the proportion of black households in each city.⁵ Values approached 1.0 as the income distribution approached perfect proportionality. (The project focused on black income because of the disproportionate homicide victimization and perpetration seen earlier for blacks.) Figure 4–4 shows this black income equality ratio for each city for 1980 and 1990.

Seven of the eight cities (all except Detroit)⁶ show similar black income equality ratios, ranging from 0.70 to 0.79 in 1980 and from 0.59 to 0.70 in 1990. Each of the seven cities showed a decrease from 1980

Figure 4-4. Black Income Equality, 1980 and 1990



Note: Income equality is measured by the proportion of income received by blacks divided by the proportion of blacks in the population. As the income distribution approaches perfect proportionality, values approach 1.0.

Source: U.S. Bureau of the Census, 1980, 1990.

to 1990 in black aggregate income relative to the number of black households. Although the discrepancy between black and other household income is striking, this measure of black income equality does not appear helpful in explaining homicide trends in the eight cities, in light of the similarity of this measure in cities with sharply differing homicide rates and trends.⁷

Employment

Employment status is another economic indicator that is thought to be potentially related to homicide trends. Researchers looked at the percentage of individuals age 16 and older who were employed, again using the 1980 and 1990 census data. The percentage employed rather than the percentage unemployed was used because, as figure 4-5 shows, in all of the eight cities a large percentage of individuals are not in the labor force; these individuals are excluded from unemployment statistics. Percentage employed better reflects employment changes for the entire city population. Figure 4-5 shows the employment situation in 1990 and does not show change over time; it is used here to show the large and variable percentage of individuals not in the labor force.

Figure 4-6 shows employment figures for white males, white females, black males, and black females

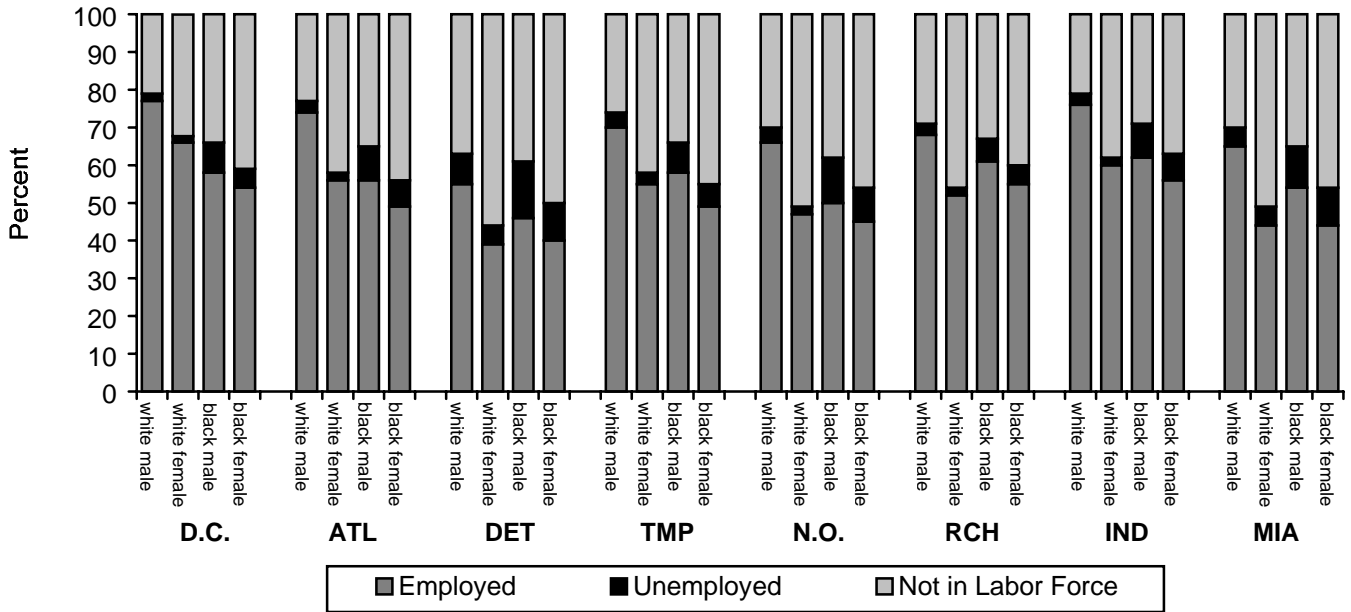
for 1980 and 1990. In New Orleans, there was a dramatic decline in employment for black males, which is in line with the large increase in homicide in this group, according to the hypothesis concerning employment and homicide trends. In Richmond, there was a smaller decline in employment for black males as well as for black females, which is again in line with the increase in homicides observed. (Unfortunately, Indianapolis, the other city in which homicide increased, lacks census employment data for 1980.) In Washington, D.C., and Atlanta, employment for black males decreased slightly between 1980 and 1990 while homicide increased, especially among black males. Statistics for Tampa also support the link between employment and homicide in a more favorable fashion. Employment was up at least slightly for all groups and overall homicide was down. In Miami, employment decreased for all groups while the overall homicide trend was stable. However, black males had the largest drop in employment, and they suffered gradually increasing homicides through 1987. Unfortunately, the Supplemental Homicide Reports, which provide the data used for group-specific analyses, are missing in Miami for 1988 to 1991. Across all eight cities, there is some support for the belief that employment may be related to homicide rates, particularly in a leading fashion; that is, changes in employment rates precede changes in homicide rates.

Household Type

The researchers also examined change over time in the percentage of households headed by a married couple, a female, or a male. In addition to the possibility that children, especially boys, may not receive sufficient male supervision and role modeling in female-headed households, household type was of interest because female-headed households are far more likely to live in poverty than households headed by males or married couples, as can be seen in figure 4-7.

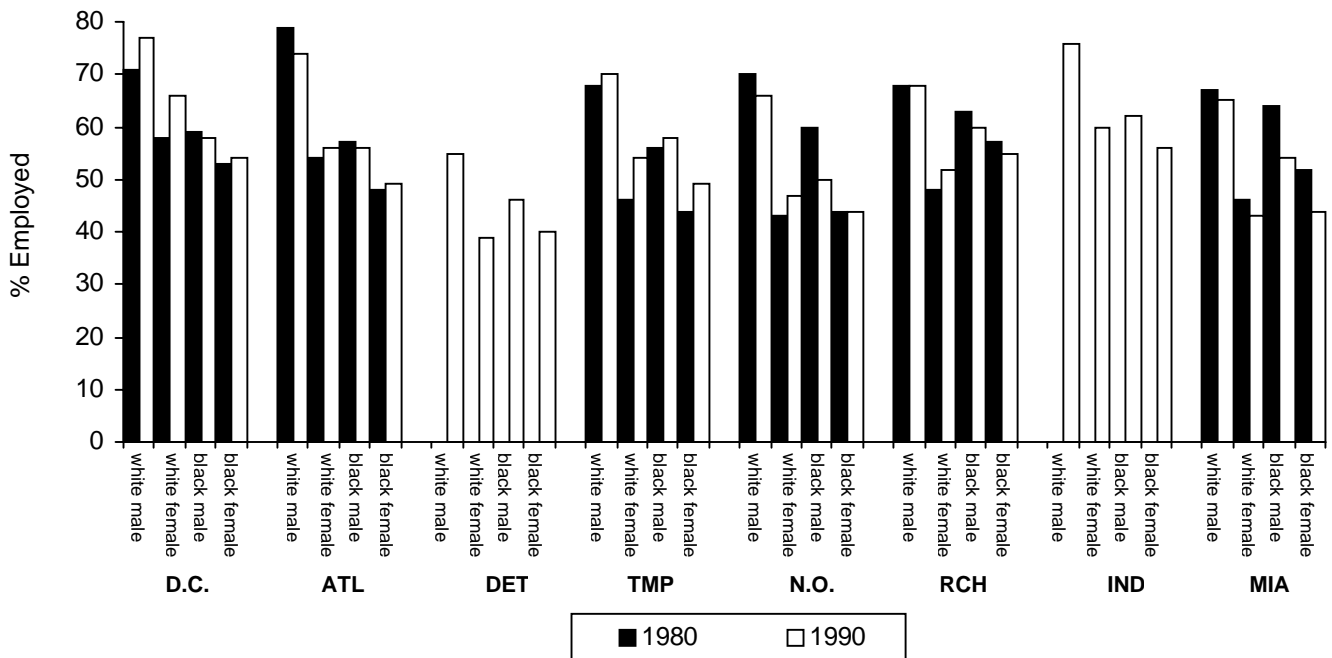
Figure 4-8 shows the change in percentage of households headed by married couples between 1980 and 1990, again using census data. The percentage of households headed by married couples decreased in all cities, in some cities dipping close to or below 50

Figure 4–5. Employment and Labor Force Status, 1990



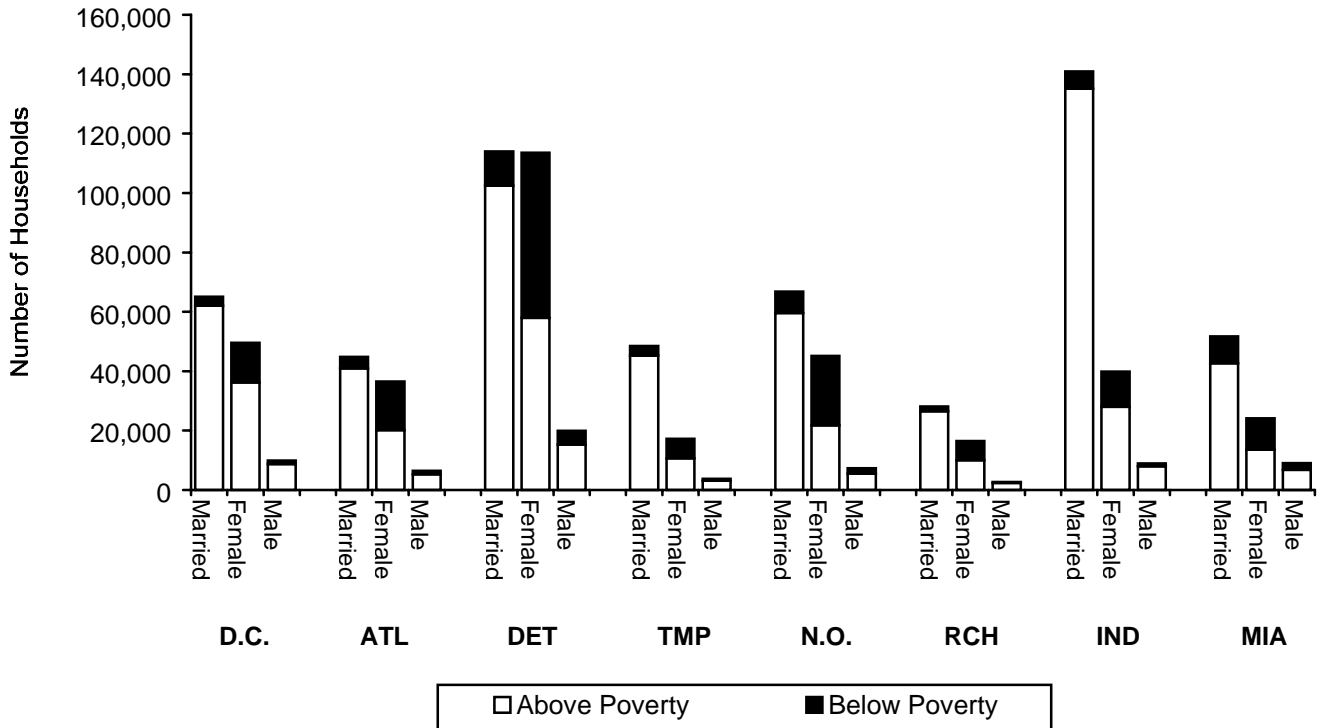
Note: Chart depicts employment status for individuals 16 and older.
Source: U.S. Bureau of the Census, 1980, 1990.

Figure 4–6. Percent Employed (Age 16 and Older), by Race and Gender, 1980 and 1990



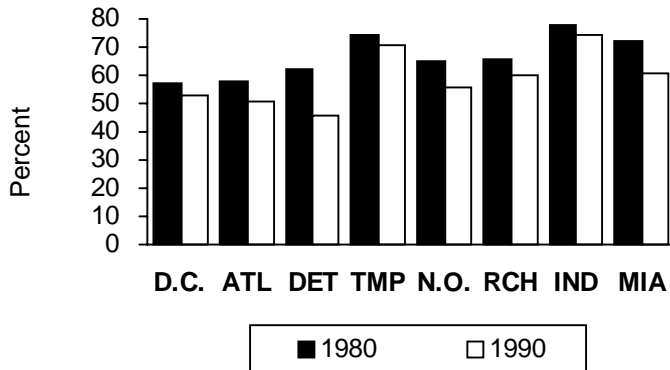
Note: Census employment data for 1980 is unavailable for Detroit and Indianapolis.
Source: U.S. Bureau of the Census, 1980, 1990.

Figure 4-7. Poverty Status by Household Type, 1990



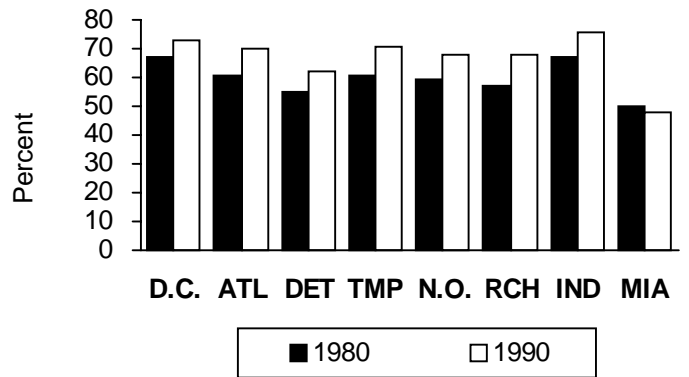
Source: U.S. Bureau of the Census, 1980, 1990.

Figure 4-8. Percent of Households Headed by Married Couples, 1980 and 1990



Source: U.S. Bureau of the Census, 1980, 1990.

Figure 4-9. High School Graduates (Age 25 and Older), 1980 and 1990



Source: U.S. Bureau of the Census, 1980, 1990.

percent. There is no apparent relationship to subsequent homicide rates, even looking at differential rates of change. For instance, Detroit showed steadily decreasing homicide rates from 1985 to 1994 but also showed the most dramatic decreases of any city in percentage of households headed by married couples. The project team did not systematically pursue the topic during onsite interviews, but several respondents offered their belief that increases in violent crime stemmed in part from the increase in female-headed households and the dissolution of the traditional family.

Education

The team also looked at educational attainment, which the researchers thought would be related to employment and poverty—and possibly to homicides. Figure 4–9 shows the percentage of people age 25 and over in each city who had graduated from high school, using 1980 and 1990 census data. Seven of the eight cities showed moderate increases in the percentage of high school graduates; Miami showed a slight decrease. Because cities with differing employment and poverty—and, of course, homicide trends—had such similar high school graduation percentages, the education-homicide link was not pursued.

In summary, economic and related factors showed at best moderate and inconsistent relationships with homicide rates. Poverty (especially among blacks) seemed potentially related to homicide trends in those cities in which the trends increased (either linearly or quadratically) during the 10-year timeframe. Income distribution (as summarized by the Gini coefficient) and the proportional share of city aggregate income earned by blacks were not related to homicide trends. Employment seemed somewhat more closely tied to homicide trends, even across cities with different trends. Education and household type did not appear to be related to homicide trends at a city level of analysis.

System Responses or Resources

The next hypothesis of interest was that various system responses or resources may have affected homicide trends in the eight cities. Although numerous systems may plausibly affect homicide, the

inquiry was limited to a small number of systems whose conjectural causal link to homicide was sufficiently short that the relationship could be potentially assessed in a fairly brief period of study. Included in the study were emergency medical services, domestic violence programs, and public housing.

Emergency Medical Services

Improvements in emergency medical services (EMS) were hypothesized to influence the homicide rate in the eight cities by increasing the relative likelihood that an assault victim with an injury of a certain severity would survive. To investigate this possibility, the researchers interviewed persons knowledgeable about EMS in the eight cities about changes in EMS during the timeframe of interest. Interviewees were also asked for their perceptions of the effect of changes in EMS on homicide. Researchers attempted to link changes in EMS to changes in the relative frequency of death resulting from serious violence.

Perhaps even more so than in other sections of this report, the exploratory nature of this inquiry needs to be recognized. The project team was attempting to link improvements in EMS to increased survivability, which effects a change in homicide trends. Although the link appears reasonable, there is a body of research assessing the effect of various improvements in EMS upon patient survivability.⁸

A broad range of improvements to EMS—to varying extents, of different sorts, and at different times—was reported in all eight cities. Common areas of improvement cited include the increased quality and quantity of vehicles and equipment such as cardiac technology or diagnostic equipment, increased training requirements and staff credentials, and more sophisticated staffing and vehicle-routing schemes such as peak-load staffing or computer-aided dispatch. The availability and quality of in-hospital trauma care, although important to the survival of assault victims, was beyond the scope of this inquiry.

Response time is one important influence on survivability and was reported by interviewees to have been affected by some of the improvements discussed and by other factors such as the number of calls for service. Most of the eight cities were able to provide

some information on response time, though cross-city measurement differences (e.g., starting time; straight mean versus upper threshold) would complicate quantitative analysis of differences in response time and relationship to survivability. Moreover, not all cities had collected response time data over the 10-year timeframe. (A project to systematically collect comprehensive response time and other data across the eight cities is planned, as described in chapter 7.)

Improvements in EMS did not occur in a vacuum. To the contrary, between 1985 and 1994, the eight cities witnessed a huge upsurge in frequency of use and power of firearms, as described in the section on guns, drugs, and gangs in chapter 5 of this report. Most EMS respondents said that from 1985 to 1994, shootings became more common, victims had worse gunshot wounds and more of them, and incidents with multiple victims became more prevalent. In Richmond, the average number of gunshot wounds per victim had more than doubled over the previous 5 years from 1.1 to 2.4. Although other cities did not provide such a concise summary statistic, Richmond was undoubtedly not alone in experiencing this type of increase in firearm damage. Any improved victim survivability, then, was *in spite of* increased firearm usage and power. This increased firearm usage and power may be offsetting what would have been improvements in survivability. Seen from another perspective, improvements in EMS may have dampened the increase in firearm homicides that would otherwise have been seen.

Before presenting the findings on the relationship between improvements in EMS and changes in homicide rates, this report will briefly summarize what was learned about the EMS systems in five cities. These summaries were chosen not necessarily because the EMS systems in these cities were exemplary but because they captured the type of issues and responses seen in the eight cities.

In Atlanta, Grady Hospital Emergency Medical Services, which serves 80 percent of the city, reportedly increased its efficiency dramatically—though not consistently—from 1985 to 1994. The percentage of paramedics (versus emergency medical technicians [EMTs]) increased from 50 percent in 1991 to 70 percent in 1996. From 1993 to 1996, the number of

emergency units increased from 34 to 44 in response to the increase in call volume. This increase, accompanied by better peak-load staffing, corresponded with a reduction in average response time, from 13 to 14 minutes in 1991 to 8 to 9 minutes in 1995. Unfortunately, interviewees reported that the improvement in response time was offset by increasing strains on the quality of emergency care from the vast growth in the increasing indigent population and Atlanta's general economic trends of growth and construction. Grady also suffered from a referral bias toward penetrating trauma because the private hospitals preferred blunt trauma patients, who were less likely to be indigent, further overburdening the system. Grady EMS purchased defibrillators in 1994, and no new vehicles were added until 1995. Furthermore, Grady experienced high turnover among its staff, who were lured toward more lucrative private-sector positions. EMS representatives were split on whether Grady's reduced response time had lowered the homicide rate, with one respondent believing that it was unlikely and another hypothesizing that increased EMS efficiency over the past decade had been offset by the increased lethality of firearms.

In New Orleans, the EMS system is owned and operated by the city (within the health department, not the police or fire department as in other cities) but is managed by a private contractor. One EMS interviewee reported that the number of EMS staff had not changed since 1987 but that other changes greatly increased efficiency. For instance, only one paramedic was previously scheduled per shift; now roughly 60 percent of the staff are paramedics. An interviewee reported that in 1987, the EMS system received about 25,000 calls and decreased the average response time from 22 to 7.2 minutes. In 1995, EMS received roughly 52,000 calls and maintained a relatively low response time of 9.8 minutes. In addition to the increase in the number of calls, this interviewee reported that New Orleans had seen a dramatic change in the types of injuries. Early in the 1985–1994 timeframe, knife and small-caliber gun wounds were common, typically with a single victim and on weekend nights. More recently, calls typically involved multiple victims with multiple gunshot wounds, and more calls occurred during the day than previously. The interviewee hypothesized that the

vast majority of violent incidents were drug related, with about 10 percent related to domestic violence and a very small number self-inflicted. In the later years of the 10-year timeframe, the age of victims also dropped; many were ages 15 to 20. EMS efficiency in New Orleans was also hindered by a sharp increase in violent crime in a remote area of the city. Because the major hospital in this area was a secondary trauma center, EMS transported victims downtown if possible. However, during periods of heavy traffic, this was not viable. An interviewee stated that the overall change in response time has had little effect on homicide, but the level of service has changed: EMS now provides better assessment and is better able to provide treatment if the victim still shows signs of life.

Richmond is known for having one of the premier trauma care centers in the country, and its services have improved dramatically in the past 8 years. In part this was due to a transition from private-service providers to what is known as the “public utility model,” which means that Richmond’s EMS and trauma care system is a professional service subsidized by the city. Richmond EMS has over 40 rescue squads, all offering advanced life support, and units are dispatched via enhanced 911. The fire department supplements EMS by responding to calls, although fire units offer only basic life support and never replace EMS responses. Response time has improved greatly in the past 10 years, dropping to 3 to 5 minutes for priority calls.⁹ The quality of lifesaving equipment in response vehicles also improved. The move to the public-utility model changed the requirements for EMS staff, all of whom must be paramedics. Training requirements became more rigorous, in part because of the increase in technology on board EMS vehicles: paramedics must be able to read electrocardiograms (EKGs). Because of the high call volume in the Richmond area, EMS is not dispatched according to peak-load staffing or strategic routing; rather, vehicles operate like police patrol cars, cruising patrol areas while awaiting radio calls. When asked about the effect on homicide of changes in EMS and response time, one interviewee said that such a relationship is hard to prove, though it would be nice to believe.

In Tampa, the deployment of EMS resources is overseen by the fire chief and the rescue chief. Like other cities, Tampa has improved its EMS in terms of staffing and equipment. The ratio of paramedics to EMTs improved, and training and licensure requirements were strengthened. The department also began purchasing new vehicles that are more reliable, more maneuverable, faster, safer, and more suitable for smaller or female drivers. EMS respondents reported that the department has been faced with an increased number of shootings and stabbings as well as gang-related violence. (Interviews with members of the police department indicated that they agreed that the severity of violence in Tampa has increased.) The victims were younger and the gun of choice seemed to be a semi-automatic weapon rather than a revolver. Despite this increase in the number and severity of calls, Tampa witnessed a slight decrease in its homicide rate. Members of the EMS unit attributed this trend to higher standards for personnel training and improved equipment.

Information about the EMS system in Miami is included in the Dade County Trauma Registry.¹⁰ According to the registry, the percentage of trauma incidents in Dade County caused by violence increased from 35 percent in 1991 to 44 percent in 1995, slightly surpassing vehicular incidents as the leading cause of trauma. Most violent incidents were shootings and stabbings. The report also discusses, in cases where the patient died, whether the patient died on the scene or in the hospital. In the third quarter of 1995, “[a]most 60 percent of the deaths among the patients not transported to the hospital were attributable to violent trauma. A lesser percentage of the in-hospital deaths was due to a weapon or violence (i.e., 35 percent). In contrast, only 22 percent of the onscene deaths were classified as vehicular trauma, while over 48 percent of the in-hospital deaths were due to vehicular trauma” The report also notes, “Another striking difference between the onscene deaths and in-hospital deaths is the medical examiner’s classification of the death The proportion of deaths classified as homicide was 31 percent in the in-hospital deaths and 36 percent in the onscene death group.” Thus, it appears that violent incidents were more likely than other incidents to cause death on the scene and, relative to other fatalities, homicide vic-

tims were more likely to die on the scene than in the hospital.

One outcome of an improved EMS system should be greater survival by victims of serious assault. This notion was operationalized by computing the total number of homicides and aggravated assaults for each city and each year.¹¹ The team then computed the proportion of this total that was homicides, which is referred to in this report as the death proportion. (The remaining proportion, aggravated assaults, represents victim survival.)

Figure 4–10 shows the proportion of serious assaults resulting in homicide for each city and each year from 1985 to 1994. Note that this figure presents homicide victimization—i.e., death—not survival. There are several noteworthy aspects of this figure. First, the proportions varied dramatically among cities, with Tampa, Atlanta, Indianapolis, and Miami showing substantially lower death proportions than Detroit, Washington, D.C., New Orleans, and Richmond. Second, substantial variability occurred over the years in many cities, particularly those with higher death proportions. Third, as expected, in cities in which a relatively high proportion of aggravated assaults resulted in death, the death proportion trend tended to follow the overall homicide trend: a linear decrease in Detroit, a quadratic decrease in Washington, D.C., and close to linear increases in New Orleans and Richmond.

The death proportion trends could have been the result of changes in the number of homicides, changes in the number of aggravated assaults, or both. Figure 4–11 shows the trends in homicide rates and aggravated assault rates (both per 100,000 population) for each city. The trends are plotted on different scales because aggravated assaults are much more common than homicides. In Washington, D.C., and Atlanta, both trends rose and then fell, though in Washington, D.C., the rise in homicide far exceeded that in aggravated assault. In Detroit, the observed decrease in the death proportion was due more to a dramatic increase in aggravated assault than to a slight decrease in homicide. In both New Orleans and Richmond, the great increase in the death proportion was due to the skyrocketing homicide rate, with only slight changes in aggravated assault. In Indianapolis, aggravated

assault increased moderately, resulting in the death proportion fluctuating almost in synchrony with the homicide rate. In Miami, the aggravated assault rate has been higher since the late 1980s than in the mid-1980s, resulting in a lower death proportion as the homicide rate remained stable.

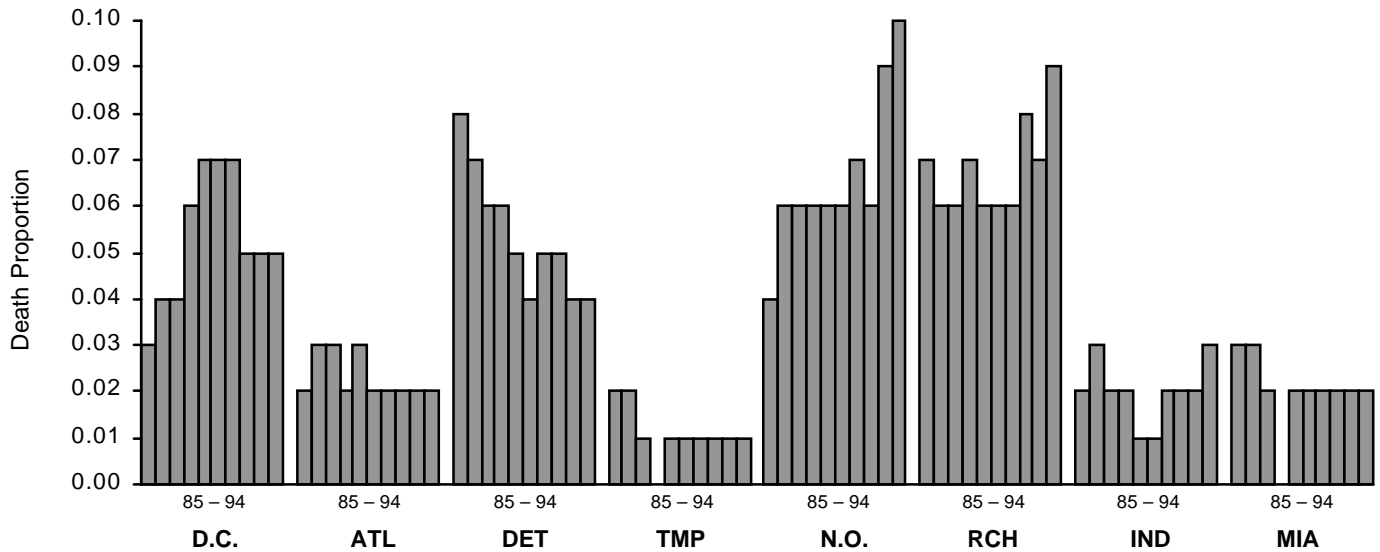
It is the research team’s interpretation that these homicide and death proportion trends are not directly attributable to changes in EMS but rather reflect the serious violence in the cities, with EMS having an ameliorative role. If nothing else were known about the cities and the observed death proportions were explained as a function of changes in EMS, Detroit would be expected to have had the greatest improvements in EMS since it had the greatest decreases in death proportion. Such was not the case. Although Detroit has recently devoted resources to improving its EMS, the system did not experience dramatic improvement over the years in which the death proportion was declining. Therefore, improvements in EMS systems are not a sufficient explanation for the changes in death proportion in Detroit—nor do they appear to be in the other cities. In Richmond and New Orleans, for instance, the escalating violence rates seem to have been little affected by good (Richmond) or improving (New Orleans) EMS systems. Of course, homicide rates could have been worse without EMS improvements.

Domestic Violence Programs

The inquiry into domestic violence and its influence on homicide trends in the eight cities had two major components. First, the team examined the homicide victim/offender relationship and how homicides of different types had changed in each city from 1985 to 1994. Second, an attempt was made to link these trends to changes in domestic violence programs. Because the focus was on homicide, this analysis touched on only a small part of domestic violence.

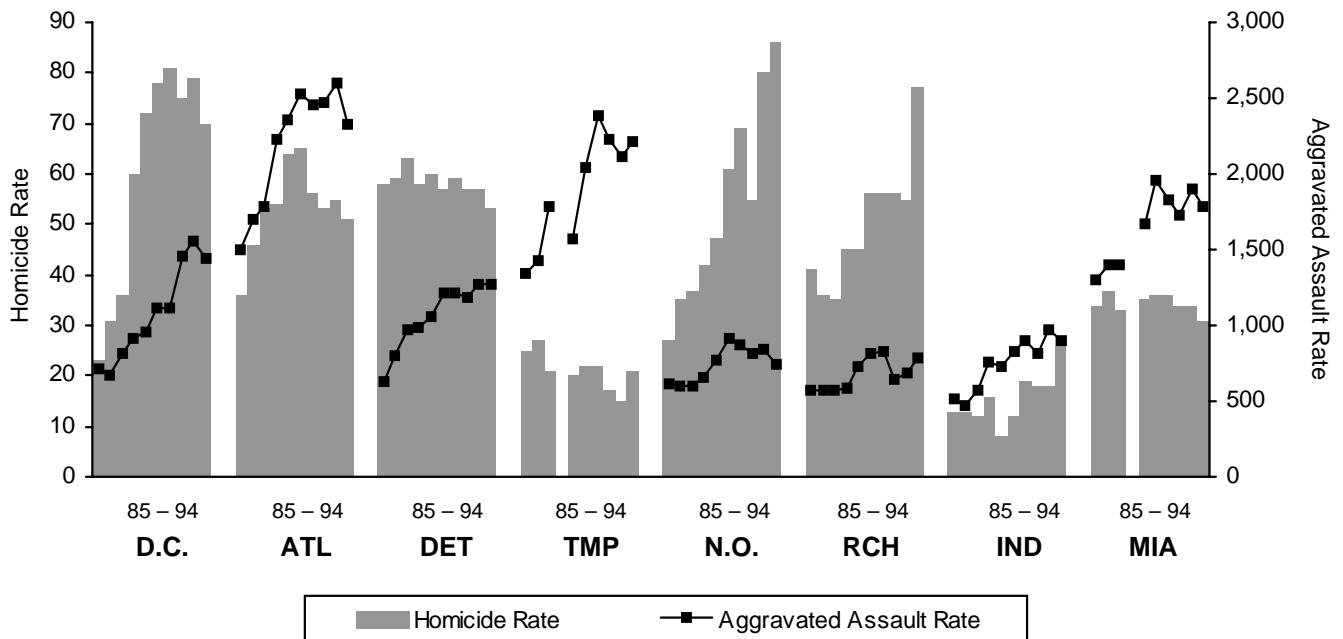
The victim/offender relationship was examined using data from the Supplemental Homicide Reports (SHR).¹² The SHR victim/offender relationship codes were combined into the following three categories: (1) intimate/family,¹³ including relatives, step-relatives, in-laws, and common law or ex-spouses; (2) persons other than intimate/family; and (3) not determined.

Figure 4–10. Serious Assaults Resulting in Homicide, 1985–1994



Source: Federal Bureau of Investigation, Uniform Crime Reports.

Figure 4–11. Homicide and Aggravated Assault Rates, 1985–1994



Source: Federal Bureau of Investigation, Uniform Crime Reports.

Figures 4–12 and 4–13 show the trends in the victim/offender relationship from 1985 through 1994 for males and females separately. (Note that the scale for males is three times that for females.) As discussed earlier, female homicide victimization is substantially lower than male victimization in all cities.

The graphs in figures 4–12 and 4–13 reflect victimization counts, not rates. The figures are based on SHR victim/offender data for the first victim in a homicide incident; subsequent victims in a multi-victim incident are excluded. However, 98 percent of the murder and nonnegligent homicide incidents recorded by SHRs between 1980 and 1994 have only one victim.

As mentioned earlier in the discussion of age-, sex-, and race-specific homicide victimization rates, female homicide victimization occurred at such low rates relative to male victimization that changes in female victimization accounted for relatively little of the change in a city’s overall homicide trend. Nonetheless, in the cities studied, a sizable portion of female victimization homicides was perpetrated by an intimate, ex-intimate, or family member.

Table 4–1 shows the average annual number of intimate/family homicides for female, male, and all

victims. The table also shows two percentages using annual intimate/family homicide counts for each of these groups: (1) what percentage of all homicides were intimate/family homicides?, and (2) looking only at homicides for which a relationship is listed in SHR, what percentage were intimate/family homicides? The second percentage was calculated because, for many homicides, the victim/offender relationship is unknown. (Table 4–1 reflects the same data as figures 4–11 and 4–12, collapsed across years.)

In six of the eight cities, over the 10 years in question, intimate/family homicides accounted for over a quarter of female homicides, ranging from 27 percent in Richmond (47 of 173) to 40 percent in Indianapolis (59 of 146). In only Detroit (17 percent) and Washington, D.C. (15 percent), did intimate/family homicides account for less than one-fourth of female homicides; in these cities, intimate/family homicides were quite numerous (179 and 67, respectively), but other types were even more common. In both Detroit and Washington, D.C., homicides in which the victim/offender relationship was undetermined were so common as to make any discussion of victim/offender relationships problematic.¹⁴ However, looking only at cases in which the victim/offender relationship was determined, the percentage of female homicides that

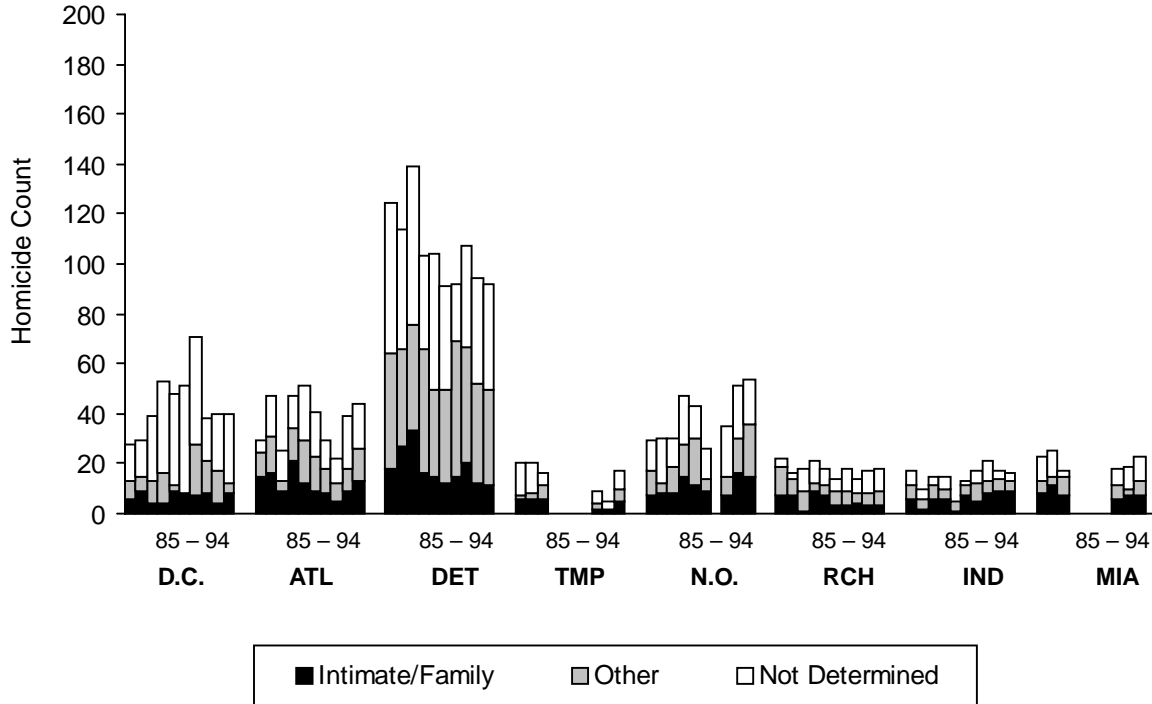
Table 4–1. Intimate/Family Homicides by Victim’s Gender, 1985–1994

City	Female Homicide Victims			Male Homicide Victims			All Homicide Victims		
	Aver. No. of Intimate/Family	Percent of all Homicides	Percent w/VOR*	Aver. No. of Intimate/Family	Percent of all Homicides	Percent w/VOR*	Aver. No. of Intimate/Family	Percent of all Homicides	Percent w/VOR*
Washington, D.C.	6.7	15	44	7.3	2	12	14.0	4	18
Atlanta	11.7	31	51	14.8	9	16	26.5	13	23
Detroit	17.9	17	29	28.6	6	11	46.5	8	14
Tampa	4.3	30	62	3.7	8	13	8.0	13	22
New Orleans	10.7	28	48	12.4	6	16	23.1	9	23
Richmond	4.7	27	45	3.5	4	8	8.2	8	15
Indianapolis	5.9	40	56	7.3	13	17	13.2	19	25
Miami	7.7	37	60	4.7	4	10	12.3	10	21

*VOR is victim/offender relationship.

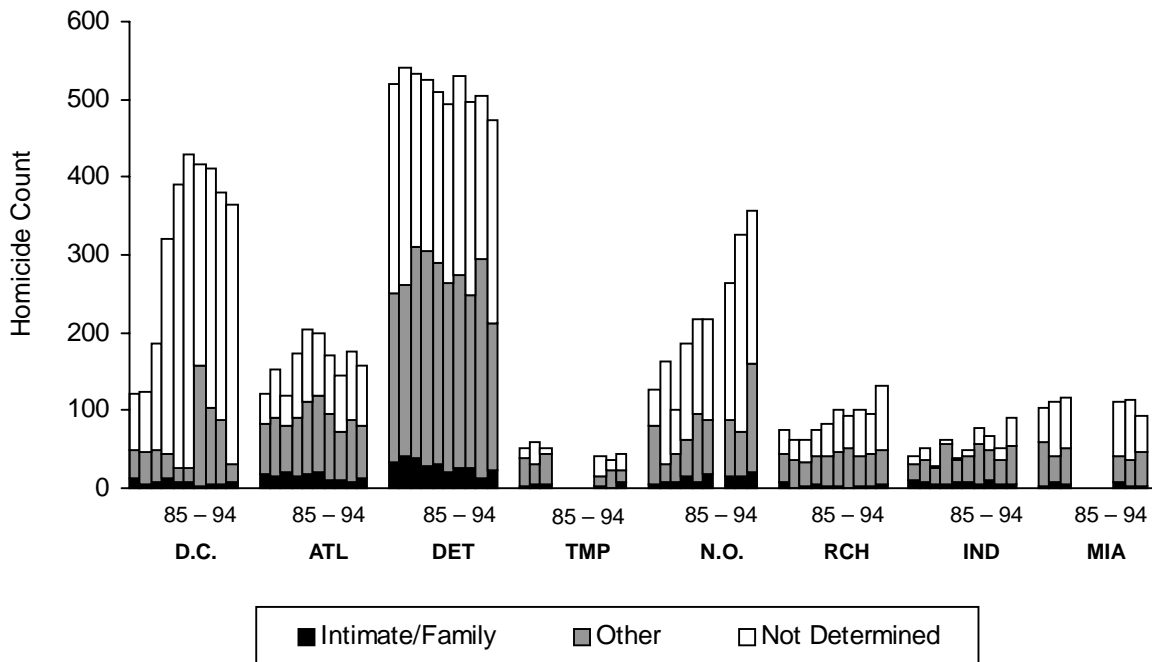
Source: Federal Bureau of Investigation, Supplemental Homicide Reports.

Figure 4–12. Female Homicide Victim/Offender Relationship, 1985–1994



Source: Federal Bureau of Investigation, Uniform Crime Reports, Supplemental Homicide Reports.

Figure 4–13. Male Homicide Victim/Offender Relationship, 1985–1994



Source: Federal Bureau of Investigation, Uniform Crime Reports, Supplemental Homicide Reports.

were intimate/family increases to 44 percent for Washington, D.C., and 29 percent for Detroit. For the other six cities, comparable percentages range from 45 percent in Richmond to 62 percent in Tampa. In addition to the large proportion of cases in Detroit and Washington, D.C., in which the victim/offender relationship was not determined, Richmond and New Orleans, two cities with linearly increasing homicide trends, both experienced dramatic increases in the number and proportion of homicides for which the victim/offender relationship was undetermined.

Table 4–1 underscores how relatively infrequent female intimate/family homicides were—averaging fewer than 12 per year in all cities except Detroit—though they constituted a sizable percentage of female homicides in most of these cities. Male intimate/family homicides occurred at roughly the same frequency as female intimate/family homicides—again excepting Detroit—but they constituted a much lower percentage of male homicides because other types of male homicide were much more prevalent than other types of female homicide.

Figures 4–12 and 4–13 and table 4–1 show that in most of the eight cities, the annual number of female and male intimate/family homicides was so low that it is difficult to be certain of the factors influencing change. In most of these cities, the observed changes showed a slight, if erratic, downward trend from 1985 to 1994. Nonetheless, for some cities, changes in domestic violence programs and any apparent link with intimate/family homicides will be discussed.

In Detroit, the study city with the most intimate/family homicides, SHR data show that from 1985 to 1994, 8 percent of all homicides—17 percent of female homicides—were categorized as intimate/family. However, in 46 percent of Detroit homicides, the victim/offender relationship was unknown. Excluding such cases, 14 percent of homicides—and 29 percent of female homicides—were categorized as intimate/family. Decreases in intimate/family homicides made an important contribution to the overall decrease in homicide in Detroit. In the first half of the timeframe (1985–1989), the average annual homicide count in Detroit was 642, of which 57 were intimate/family. In the second half of the timeframe (1990–1994), the average annual total dropped to 595, of

which 36 were intimate/family. Thus, the annual average homicide count decreased by 47, with 21 fewer intimate/family homicides. The drop in intimate/family homicides accounted for 45 percent of the overall decline, though intimate/family homicides made up just 9 percent of homicides from 1985–1989. From the first 5 years to the second 5 years, overall homicide decreased by 7 percent while intimate/family homicide decreased by 37 percent.

In Detroit, the researchers interviewed an individual involved with domestic violence programs. The interviewee asserted that domestic violence is among the most important factors influencing the level of homicide and other violent crime in Detroit. Detroit has two domestic violence shelters with a total of 121 beds. The shelters offer a variety of services such as a 24-hour crisis line; childcare; support groups for residents, nonresidents, and batterers; counseling; and housing and transportation assistance. Many of these services strive to help women take control of their lives and be less dependent. The interviewee reported that funding for these programs had increased over the past 10 years but was not able to keep up with the increased demand for these services. The interviewee noted that the number of reports of domestic violence increased over the 10-year period, especially in the past several years.

Atlanta also experienced a decline in intimate/family homicides disproportionate to the overall decline in homicide. Atlanta’s overall homicide rate showed a quadratic decreasing trend from 1985 through 1994. In the peak years of 1988–1990, the average annual homicide count was 239, with an average of 32 intimate/family homicides. In 1992–1994, the average annual homicide count was 194, with 19 intimate/family homicides. Comparing these two periods, the overall average dropped by 45 and the intimate/family averaged dropped by 13. The decrease in intimate/family homicides accounted for 30 percent of the overall average decrease, although intimate/family homicides accounted for just 13 percent of the homicides in 1988–1990. For females, the effect was even stronger: 44 percent of the decrease in female homicides from 1988–1990 to 1992–1994 was due to decreases in intimate/family homicides.

Five shelters with a total of approximately 115 beds are available to victims of abuse in the greater Atlanta area. Although the total number of beds did not change greatly between 1985 and 1994, the interviewee reported that the quality of services improved. Shelters became more organized and professional, and more licensed social workers became involved in providing services. The interviewee also cited increased cooperation between domestic violence service providers and the police department since 1985 and noted that police officers have been making more arrests and intervening more often in domestic violence cases than they did before 1985.¹⁵

Tampa serves as an excellent example of an inquiry into domestic violence and intimate/family homicides in two ways. First, its low number of intimate/family homicides—9, 11, and 11 in 1985, 1986, and 1987—were reduced even further to 4 in 1992 and 1 in 1993, at least in part through ambitious domestic violence programs, which are described below. Second, Tampa also serves as an example of the fickle nature of small numbers; in 1994, the intimate/family homicide count rebounded to 12, offsetting the reductions seen in the prior years. Nonetheless, intimate/family homicides contributed to the linear decrease in the homicide trend in Tampa. In 1985–1987, the average homicide total was 73.3, with 10.3 intimate/family homicides; in 1992–1994, the average homicide total was 50.7, with 5.6 intimate/family homicides. The decrease in intimate/family homicides accounted for 21 percent of the overall decrease, though only 14 percent of homicides in 1985–1987 were intimate/family homicides.

Tampa has a large number of services available to abuse victims and their children. The domestic violence shelter has 77 beds and 20 cribs. Because of Project Debbie, no one is turned away; hotels and motels have agreed to provide available rooms at no charge to domestic violence victims. Because of this initiative, the shelter itself—which is usually full to capacity—can arrange safe temporary housing for those in need. Another important program is the grade school housed at the shelter. Recognizing that children who seek shelter with their abused parents are at risk of being abducted while at school, the city of Tampa provides the shelter with a number of teachers who work on the shelter premises. Finally, an of-

fender program is also operated by the shelter. The program is an intensive 26-week course to prevent offenders from abusing again. Ninety percent of participants have been ordered by a court to take part in the program. No data on the success of the program are available, and even the shelter workers believe that it takes more than participation in the program to change an offender's behavior. However, this program can provide those who want to change with skills to end their violent behavior.

To summarize the influence of intimate/family homicides on overall homicide trends, in three of the decreasing trend cities (Detroit, Atlanta, and Tampa), a disproportionately large part of the decrease in homicides occurred in intimate/family homicides. In the other decreasing city (Washington, D.C., which is missing offender data for many homicides), the number of homicides classified as intimate/family was so small (only 4 percent overall) that a similar analysis is not helpful.

Among cities with worsening homicide trends, only in Indianapolis did intimate/family homicides appear to contribute to the overall trend, and even then to a lesser extent than other categories of homicide. Among Indianapolis male homicide victims—who were far more common than female victims—the “other” (not intimate/family) and the “not determined” categories showed the greatest increases. Intimate/family homicides were a large part of the increase in female homicides, but female homicides contributed little to the quadratic increasing trend.

In Richmond and New Orleans, the linear increase in homicide was due almost entirely to male homicides. Among these, homicides in which the victim/offender relationship was undetermined accounted for a large and increasing share. Intimate/family homicides accounted for a small share of male homicides (4 percent in Richmond and 6 percent in New Orleans on average over 1985–1994). Among females, intimate/family homicides have been fairly steady in Richmond since 1990, accounting for an average of three homicides per year. In New Orleans, female intimate/family homicides increased in 1993 and 1994, but even in those years they accounted for only about 30 percent of female homicides; moreover, female homicides were vastly overshadowed by male

homicides. Increases in intimate/family homicides did not drive the increasing homicide trends seen in Indianapolis, Richmond, and New Orleans, but neither did they decrease homicide trends as they did in other cities.

The decreases in intimate/family homicides in certain cities cannot be attributed solely to their domestic violence programs. Other factors, including police response and changing social attitudes toward domestic violence, may have come into play. Also, as Rosenfeld and colleagues have suggested, other factors may contribute to the decline in intimate partner homicides, including a decrease in “domesticity” or the prevalence of marriage.¹⁶ As mentioned earlier, the percentage of households headed by married couples decreased in the eight cities; it is possible that declining marriage rates, and a corresponding increase in single-headed households, contributed to the decreased prevalence of intimate/family homicides.

Decreases in intimate/family homicide contributed strongly to declining homicide trends in three cities, and interviewees in these cities reported improvements in domestic violence programming and interactions with police. NIJ staff are planning a more intensive study of domestic violence programs and their effect on domestic violence and homicide in the eight cities.

Public Housing

A disproportionate number of homicides—as well as other crimes—occur in and around public housing developments, according to knowledgeable interviewees and prior research. In research complementary to this study, National Institute of Justice staff will conduct spatial analyses of homicides in the eight selected cities with available geocoded data. One focus of this research will be to determine the prevalence of homicides in and around public housing developments and assess changes over time. These spatial analyses will add to the understanding of homicide in these cities, particularly within and around public housing.

In the present study, the team interviewed representatives of public housing departments and public hous-

ing security. They asked about violence and homicide in and around public housing and measures taken to address these and other problems. In cities in which the police were responsible for providing security in public housing, separate interviews were held with relevant police staff; these interviews are discussed in the criminal justice section in chapter 6. The following section describes what was learned about public housing responses to violence in some cities, though without spatial analyses these responses cannot be linked to outcomes. In most of the cities, many of the enhanced responses to violence in public housing occurred recently and thus did not influence homicide between 1985 and 1994.

Respondents in many cities noted that efforts were being made to refurbish or update the public housing stock, with one result being an increased sense of ownership, pride, and responsibility among residents. These attributes are being nourished in some cities through programs that encourage and support residents to purchase public housing units. A sense of community involvement has also been fostered through community-oriented policing, which has been implemented within public housing developments in many of the cities. Community-oriented policing in public housing and its effects are discussed at more length in chapter 6.

The Housing Authority of New Orleans (HANO) has its own police force of 30 officers, who work in three shifts. The officers receive 12 hours of security training and one seminar per year and qualify with their weapons twice each year. HANO would like its officers to be trained with and equivalent to city police officers, but that is currently not the case. HANO is involved with the Multi-Agency Safe Home program, initiated in 1994 by the U.S. Attorney General through the Louisiana Attorney General. One interviewee felt that the program had a “strongly positive” impact on homicide but could not provide further information or data. The Director of Security of HANO tracks gangs and estimates that one or two “posses” exist per development. HANO reportedly has a zero-tolerance policy regarding drugs in public housing and will evict even for marijuana possession.

In Atlanta, a public housing authority representative noted that recent improvements to public housing

stock have improved residents' attitudes and their sense of ownership, which in turn has caused a decrease in violent crime. Although improvements in Atlanta's public housing have occurred in the past 2 years (or are still in the works), most of the public housing stock was substandard from 1985 to 1994. In terms of responses to violent crime in public housing, most improvements were still in the planning stages at the time of the mid-1996 visit. Until April 1996, security was not under the public housing authority but was left to the Atlanta Police Department (APD). Thirty APD officers were dedicated to patrolling public housing property, which represented an increase of at least 50 percent over the past 2 years. Officers were involved with vehicle patrols, foot patrols, responding to calls, meeting with tenant association presidents and resident managers, and participating in a youth tutoring program. According to police, the increase in police presence in public housing has had a slight impact on violent crime and homicide. Public housing police have also made a shift toward community-oriented policing in the past 3 or 4 years, which has improved homicide investigations because residents were more willing to cooperate with investigators. Other enhancements were only beginning, including the use of parking permits and resident IDs; Crime Prevention Through Environmental Design, such as trimming hedges, erecting fences, and providing adequate lighting; and neighborhood watch programs.

In the past 2 years, the Detroit Housing Department (DHD) and the Detroit Police Department (DPD) have undertaken an ambitious, high-level collaboration targeting crime in and around public housing. Interviewees reported that since the collaboration, arrests have increased dramatically and quality of life in public housing developments has improved greatly. Law-abiding residents once again used common areas, which they had stopped doing because of fear of crime. While the collaboration occurred too late to explain the decrease in homicides in Detroit, it is a promising area for future focus. Much of the following description was taken from a Housing Support Section (HSS) report.¹⁷

In 1994, DHD and the DPD entered into a security agreement in response to the conditions in the housing developments, which one report called deplorable.

According to this report by the Housing Support Section of the DPD:

There were both internal and external theft, drive-by shootings, turf wars, and numerous acts of retaliation, all of which were violent. Drug trafficking was rampant. The landscape was imbued with abandoned or inoperable motor vehicles and boats. All of these things had become commonplace in the housing developments.

The security agreement established the Public Housing Unit (PHU) to address this situation in August 1994. From August until December 1994, the PHU made 361 felony and 589 misdemeanor arrests. In January 1995, members of the PHU attended the Police Community Training Course at the Michigan State University School of Criminal Justice. In February 1995, the PHU was upgraded and renamed the Housing Support Section. HSS has 50 sworn officers, including an inspector, a lieutenant, and 7 sergeants. HSS is described as “. . . the core of an amalgamation of police, civilian security patrol officers, civilian closed-circuit television monitors, and civilian resident monitors.”

In 1995, HSS made 865 felony arrests, 858 misdemeanor arrests, and 91 juvenile detentions. HSS attacked numerous problems in the housing developments through the following targeted approaches. To fight internal theft they implemented strict inventory control, 24-hour video surveillance, and prosecution of criminal acts by employees. Operation Haul Away removed 200 motor vehicles and boats from housing properties. Vertical patrol, residents' patrol, and designated car patrols have built confidence and empowered residents. Aggressive patrols attacked the problems of drive-by shootings, turf wars, and retaliations. A liaison was established with the PD's Narcotics Division, and Operation Rip Ride targeted drug traffickers and buyers, applying criminal and civil (e.g., forfeiture) penalties. According to an HSS report, “Finally, a true mergence and spirit of cooperation has been created between the upper levels of the administration, site administrators and staff, maintenance, and the Housing Support Section” A police officer was assigned to work in the housing administration office and serves as liaison between

the police and public housing, greatly enhancing close working relationships and procedures.

The approach used by HSS included three phases. In Phase 1, the community policing team was introduced to the residents. Communities, groups, and individuals called and requested specific teams, and officers not only responded to criminal problems but also attended community meetings and addressed adult and youth groups. Phase 2 involved aggressive community policing, including establishing stations in each of the major developments; proposal of city ordinances, rules, and regulations to help curtail activities negatively affecting public housing; and aggressive law enforcement. Phase 3 was the empowerment of residents to plan, recruit, train, and implement community watches, resident patrols, and crime prevention.

A plan has been developed to train the entire HSS as a bicycle patrol, a high-visibility, proactive patrol concept. Officers will be aware of crime patterns and conditions in assigned areas and will maintain positive community relations. HSS has also instituted a graffiti removal program carried out in conjunction with the maintenance department of each development. In addition to removing graffiti, pictures are taken and offenders are aggressively pursued.

HSS has planned a computer network that would link security to the public housing administrative computer's residential database and provide a listing of residents. In addition to identifying residents, the link would be used to couple administrative sanctions to criminal prosecution. It would also help HSS identify problem areas. All residents and employees were provided identification cards that were used in "readers" to open doors, providing a record of who used the door and when. Along with these improvements in policing, the housing developments have benefited from increased attention to maintenance. The backlog list of maintenance requests has decreased from more than 11,000 to roughly 600.

Interviewees in Detroit rated the change in homicides occurring in or near public housing as a "strongly improved situation." They believed that public housing was probably less violent than the city in general

and that the collaboration and particularly the focus on community policing have had major impacts.

After collecting available geocoded homicide data from the eight cities, the researchers will use spatial analyses to assess the extent to which homicides occurred in and around public housing and the extent to which this trend changed over time.

Summary

This chapter explored some macro-level factors that may be related to or help explain the homicide trends. In looking at factors possibly contributing to homicide trends, the team focused on economic indicators and related factors as well as on system responses, including emergency medical services, domestic violence programs, and public housing authority responses to violence. Although they had hoped to assess the effectiveness of prevention programs in reducing homicides, they were not able to do so. The lack of a discussion on prevention should not be seen as criticism or discounting of prevention.

Economic and related factors showed at best moderate and inconsistent relationships with homicide rates. Poverty (especially among blacks) seemed potentially related to homicide trends in those cities in which the trends increased (either linearly or quadratically) during the 10-year timeframe. Income distribution (as summarized by the Gini coefficient) and the proportional share of city aggregate income earned by blacks were not related to homicide trends. Employment seemed somewhat more closely tied to homicide trends, even across cities with quite different trends. Education and household type did not appear to be related to homicide trends at a city level of analysis.

System responses to violence seemed to have some effect, though they could not overcome the tide of violence—particularly that related to the increased use and power of guns—seen in many of the cities at some point during the timeframe. The team investigated the proportion of aggravated assaults resulting in death as a measure of the ability of an EMS system to affect homicide rates but concluded that the death proportion trends did not seem attributable to changes in EMS. Researchers also did not find that changes in EMS were a sufficient explanation for changing

homicide trends, although EMS improvements probably helped to dampen homicide rates that otherwise may have been worse.

Homicides in which the victim and offender were intimates or related made up a relatively small portion of homicides in the eight cities, though they accounted for a sizable portion of female victim homicides. Homicides in which the victim/offender relationship was not determined made up a large number of the homicides in Washington, D.C., and Detroit and a growing number in New Orleans and Richmond. Domestic violence programs may have contributed to the overall decline in homicides in cities with declining trends, for in three of these cities (Detroit, Atlanta, and Tampa) a disproportionately large part of the decrease occurred in intimate/family homicides. However, other factors such as police response may have contributed to or been responsible for this disproportionate decrease.

Many interviewees believed that an undue share of violence and homicide occurred in and around public housing. In the future, researchers plan to collect geocoded homicide data that can be used in spatial analyses to test this belief and assess change over time. Most of the steps taken by public housing or public housing security/policing in response to violence have occurred near the end of or after the timeframe studied, so they are not plausible candidates for explaining homicide trends during the study period.

Notes

1. See, for example, Blau, J.R., and P.M. Blau, "The Cost of Inequality: Metropolitan Structure and Violent Crime," *American Sociological Review* 47 (1982): 114–129; Messner, S.F., "Economic Discrimination and Societal Homicide Rates: Further Evidence on the Cost of Inequality," *American Sociological Review* 54 (1989):597–611; Sampson, R.J., "Race and Criminal Violence: A Demographically Disaggregated Analysis of Urban Homicide," *Crime and Delinquency* 31 (1985):47–82; and Golden, R.M., and S.F. Messner, "Dimensions of Inequality and Rates of Violent Crime," *Criminology* 25 (1987):525–541.

2. U.S. Bureau of the Census, STF–1 and STF–3 Census Summary Tapes, Washington, D.C.: U.S. Bureau of the Census, 1980; and U.S. Bureau of the Census, STF–1 and STF–3 Census Summary Tapes, Washington, D.C.: U.S. Bureau of the Census, 1990. All analyses based on census data were subject to limitations of the accuracy of those data. For instance, poverty and income data were based on reported income.

3. For 1980, the household income categories were (1) less than \$5,000, (2) \$5,000–\$7,499, (3) \$7,500–\$9,999, (4) \$10,000–\$14,999, (5) \$15,000–\$19,999, (6) \$20,000–\$24,999, (7) \$25,000–\$34,999, (8) \$35,000–\$49,999, (9) \$50,000 or more. For 1990, the categories were (1) less than \$5,000, (2) \$5,000–\$9,999, (3) \$10,000–\$14,999, (4) \$15,000–24,999, (5) \$25,000–\$34,999, (6) \$35,000–\$49,999, (7) \$50,000–\$74,999, (8) \$75,000–\$99,999, and (9) \$100,000 or more.

4. Balkwell, J.W., "Ethnic Inequality and the Rate of Homicide," *Social Forces* 69 (1) (1990):53–70.

5. This is equivalent to looking at the ratio of the mean income for black households to the overall mean household income.

6. In Detroit, black aggregate income was nearly proportionate with household representation in 1980 (0.96) and even slightly closer to proportionate in 1990 (0.98).

7. Although the two measures of income distribution discussed are common ways of looking at income distribution and equality, neither measures precisely what may be of most relevance to homicide rates: income of the more marginalized, low-income sectors of the society. An attempt was made to assess the change over time in the percentage of the city aggregate income that was earned by low-income households (for example, those in a certain percentile of annual income), but data limitations precluded doing so.

8. See, for example, Cayten, C.G., J.G. Murphy, and G.R. Schwartz, "The Effect of EMS Systems Factors on Trauma Survival," in *Principles & Practices of Emergency Medicine*, 3d ed., Philadelphia, Pennsylvania: Lea & Febiger, 1992:3129.

9. Response time is measured as 95 percent of upper threshold. The response time clock starts when the dispatch button is pushed rather than when the call comes in.

10. Dade County Office of Trauma Services, *Dade County Trauma Registry: Third Quarter Report, 1996*.

11. This analysis used available Uniform Crime Reports (UCR) data, which depends upon the victimization being reported to the police. Moreover, not all aggravated assault victims are at risk of death, nor are they served by EMS. Future analyses would benefit from use of trauma registries, which might provide more precise estimates of victimization, survivability, and use of EMS systems. Nonetheless, UCR data on homicide and aggravated assaults are useful in assessing changes in survivability that may be due in part to EMS systems.

12. The adequacy of SHR victim/offender relationship data varies among cities and is affected by many factors, including coding practices of the local police departments, homicide clearance rates, and the extent to which data are updated. Zahn, M.A., and M. Riedel, "National Versus Local Data Sources in the Study of Homicide: Do They Agree?" Paper pre-

ented at the annual meeting of the American Society of Criminology, Toronto, Canada, 1982, have compared SHR data and local data.

13. Homicides defined as intimate/family fall within 1 of the following 21 SHR categories: boyfriend, girlfriend, husband, wife, common-law husband, common-law wife, homosexual relationship, ex-husband, ex-wife, father, mother, stepfather, step-mother, son, daughter, stepson, stepdaughter, brother, sister, in-law, and other family.

14. Homicide clearance rates, which are directly implicated in the extent to which the victim/offender relationship is known, are discussed in chapter 6 of this report on criminal justice system responses.

15. Police practices concerning domestic violence are discussed in chapter 6 on criminal justice system responses.

16. Dugan, L., D. Nagin, and R. Rosenfeld, "Explaining the Decline in Intimate Partner Homicide: The Effects of Changing Domesticity, Women's Status, and Domestic Violence Resources," paper presented at the annual meeting of the American Society of Criminology, Chicago, Illinois, 1996.

17. Detroit Police, Housing Support Section: Statistical Summary, unpublished report, 1995.

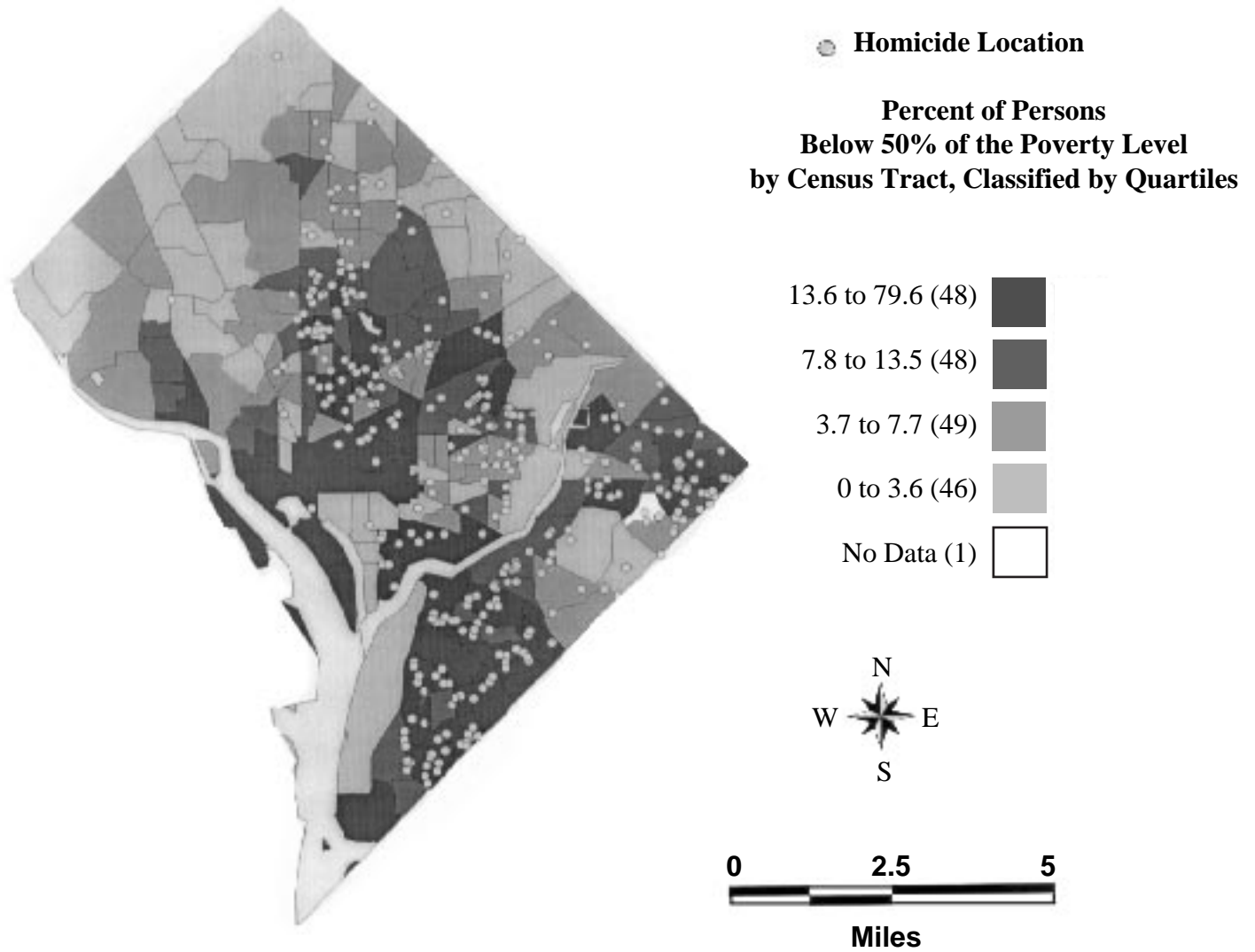
Homicides and Poverty in Washington, D.C., 1994

The following map shows the location of each homicide in Washington, D.C., in 1994, along with the percentage of persons living in poverty in each census tract according to 1990 census data. The poverty categories reflect the percentage of persons in each tract with an annual income less than 50 percent of the poverty level. Roughly one-fourth of the census tracts in the city fall into each of the following poverty categories: 0 to 3.6 percent, 3.7 to 7.7 percent, 7.8 to 13.5 percent, and 13.6 to 79.6 percent. (That is, in 46 of 192 tracts, 0 to 3.6 percent of persons were in poverty; in 49 tracts, 3.7 to 7.7 percent of persons

were in poverty; in 48 tracts, 7.8 to 13.5 percent of persons were in poverty; and in 48 tracts, more than 13.6 percent of persons were in poverty. No data were available for one tract.)

The map shows that homicides were more likely to occur in high-poverty areas, with few homicides occurring in low-poverty areas. In future research, NIJ staff will quantify this relationship and the extent to which it changed over time, not only in Washington, D.C., but also in the other study cities.

Figure 4–14. Homicides and Poverty In Washington, D.C., 1994



Sources: Washington Metropolitan Police Department; 1990 Census of Population and Housing / NIJ Crime Mapping Research Center.

The Micro Domain: Behavior and Homicide

The micro domain of this study considered the effects of individual behavioral and, to a lesser extent, situational factors on homicide. Where the macro domain considered the broad range of societal forces such as economic activity and demographic trends for their implications for homicide, the micro domain considered factors that are rooted in individual behavior but have a cumulative effect on homicide patterns.

The three micro factors hypothesized to be most strongly associated with homicide were drugs, guns, and gangs. Drug-using behavior, although perhaps motivated in part by macro-level forces, is fundamentally an individual act. The cumulative drug-taking behavior of individuals can affect homicide through the resulting drug market structure and individuals' participation in drug markets.¹ Similarly, an individual's drug-taking behavior can influence homicide through factors such as domestic violence and drug-motivated robberies and assaults. Guns, too, can have both cumulative and situational elements. The cumulative impact of individual decisions to carry weapons has social consequences—in any given situation, the presence of a gun can affect the likelihood of violence.² Finally, gang members may commit acts both collectively or individually, with individual acts attributed to gang membership or affiliation.

This portion of the report is organized to consider drugs, guns, and gangs sequentially. Each topic area is oriented to a hypothesis or hypotheses linking drugs, guns, and gangs to homicide. These hypotheses

form the basis of the structured interviews that were held in each community. Within topic areas, results from the interviews are considered first, including both perceptions and policy events at the community level. After results from the interviews are presented, additional extant data that relate to the hypotheses and interview results are analyzed.

Several general conclusions can be stated up front. Interviews with more than 25 local officials in each city and supplementary data analysis suggested strong links between drugs, guns, gangs, and homicide. Perhaps more important, concern in the study communities was higher for guns and drugs than for gangs, although this can in part be explained by the fact that the study was not fielded in any cities strongly identified with gang activity. In addition, it appears that communities developed the widest and most comprehensive range of responses to drugs. Guns were addressed within a more narrow range of community responses, primarily law enforcement and prosecution based. Concern about these factors' impact on violence also held up both across and within cities, particularly for drugs and guns. Across cities, community concerns about guns, drugs, and violent crime tended to be independent of whether the homicide rate was increasing or decreasing. Within cities, there was also striking, broad agreement that these factors were important influences on homicide. Respondents ranging from emergency ambulance crews to police officers and prosecutors to youth activities coordinators expressed strong perceptions about the links between these factors and violence.

Drugs

Two Hypotheses

The drug portion of the study addressed the following two hypotheses about drugs' influence on communities' homicide rates:

- ◆ Drug market stability is inversely related to the level of violent crime and homicide.
- ◆ Drug consumption is directly related to the level of violent crime and homicide.

In essence, the stability hypothesis represented one-third of the tripartite framework developed in Goldstein (1985) and Goldstein et al. (1989). This framework suggests that drug market violence can be broken into structural, pharmacological, and economic/compulsive components. Structural violence relates to disputes over the dealing or marketing of drugs; pharmacological violence is a direct function of aggression induced by the consumption of drugs; and economic/compulsive violence is motivated by the need to acquire resources to purchase drugs. While not specifying a relationship between specific drug market types (e.g., competitive) and violence, Goldstein et al. established that the structural components are the dominant motive or causal factor in murders classified as *drug related*. Thus, changes in *overall* homicide rates and trends in a community were expected to be partially explained by changes in the stability of drug markets.

Fundamentally, the stability hypothesis related to drug market interactions as opposed to specific market types. Many interpret stability to mean the presence or absence of market competition that promotes conflict among drug dealers. Situations characterized by high volumes of either entry or exit of both buyers and sellers may be considered unstable. Hence, observed changes in market structure, induced by changes in drug demand or by policy interventions that result in the destruction of local retail monopolies, may be one potential predictor of instability. Such conflict, however, may be present in a variety of circumstances, including expanding drug markets as dealers fight to hold on to monopolistic profits and declining drug markets as dealers with few

transferable skills fight to retain customers. Generally, small retail markets in their establishment phases are likely to be marked by tightly controlled, oligopolistic, or monopolistic structures. Although such structures may use violence to fend off new entrants or discipline members, the violence is also likely to be a function of the number of participants or entrants. In short, specific competitive drug market structures do not reliably predict violence.³

Stability, however, can have numerous meanings with respect to drug markets. Other aspects of stability that emerged from the analysis included price and transaction stability, participant stability, and intervention stability. Consequently, drug prices and transactions, drug market participation, and drug market interventions were also examined for their effects on drug market stability and, thus, on homicide.

In contrast, drug consumption in a community was expected to influence violence in two ways. The primary mechanism expected was that as the number of users grew, so would the need for retail dealers. Thus, demand would fuel violence by affecting the number of dealers operating in a community and, indirectly, market stability. In addition, the level of drug consumption in a community was expected to influence the homicide rate through the economic/compulsive and, to a lesser extent, pharmacological components. In other words, the motives behind drug users' violent crimes were expected primarily to be economic factors such as debt, the need to raise money to support a habit, and the like, or the chemical properties of the drug consumed. Finally, the level of drug consumption, particularly of drugs linked to violent and aggressive behavior such as crack, was expected to affect homicide by increasing domestic violence.

Perceived Impact of Drugs on Violent Crime and Homicide

Most respondents perceived drugs to be of significant importance to the level of violent crime and homicide in their communities. On a 1 to 10 scale—with 1 being “not at all important” and 10 being “the most important” to homicide in the community—most respondents rated drugs at 7 or above. The only

respondents to routinely rate drugs lower than 7 were school administrators, who were asked to rate drugs' impact on homicide within the narrower confines of the school environment. Overall, drugs averaged 7.6 on the 10-point severity scale. Excluding school administrators, drugs averaged a score of 8.2.

Crack is by far the drug most commonly associated with community violence. Uniformly, community respondents mentioned crack as a strong contributor to violence. No other drug, even after repeated probing, was mentioned as regularly or rated as severely as crack. Powder cocaine was given some weight as a factor in local violence. Such violence, however, tended to be attributed to wholesale dealers or described as an auxiliary function of producing crack. Drugs such as PCP and LSD were mentioned occasionally as sources of violence, but typically in the context of individual arrestees' demeanor and behavior. PCP and LSD markets were not significantly associated with dealer-to-dealer violence. No respondents mentioned heroin as sources of violence, except in isolated incidents.

Interviews were not implemented in any sites where there were significant local problems with methamphetamine. When respondents were probed on local methamphetamine use, representatives from at least two communities—Tampa and Atlanta—indicated they detected a growing problem. Nevertheless, the magnitude of the methamphetamine problem was too small in these communities to give reliable answers. In Washington, D.C., and Richmond, marijuana markets were cited as emerging sources of violence. Authorities in these cities speculated that, as marijuana use grows and crack markets decline, crack dealers may be displaced to marijuana markets. The emerging links between marijuana markets and violence may be a function of both dealer movement and the extent to which marijuana is packaged or laced with stimulants such as crack. Authorities stressed that, although marijuana market violence did not appear to be widespread, it was a source of growing concern.

Communities with declining homicide rates ranked drugs just as severely as communities with increasing or stable homicide trends. The perception data covered only one point in time, whereas the homicide

data covered multiple time periods. Thus, it was not possible to determine if concerns about drugs' impact on violence have changed in tandem with homicide rates. Nevertheless, a comparison of the static rankings revealed that communities with starkly different homicide rates still ranked drugs with approximately equal severity. This suggested an undifferentiated and perhaps "sticky" (or unchanging) view of drugs. As will be discussed later in this section, the underlying drug-use trends in these communities have changed substantially by one important measure in recent years. The relatively undifferentiated view of drugs, in turn, suggests that residents may need better information about the level of drug use in their communities.

Federal law enforcement officials tended to view drugs' impact on local homicide patterns as less severe than local authorities. Local authorities registered drugs at 8.8 on the scale, compared with 7.2 for Federal law enforcement authorities. These differences may be explained by a variety of factors. One important distinction is that whereas local respondents were able to confine their impressions to the city proper, Federal law enforcement authorities often covered much larger jurisdictions that include suburban and rural territories. Federal authorities' perceptions of drugs' links to violence may be diluted to the extent that they have larger jurisdictions and that drug-related violence tends to be concentrated in urban cores. Relatedly, Federal authorities may place drugs in a larger relative context in a way that local authorities cannot. That is, although conditions may be bad in one city, Federal authorities may be better positioned to assess how much worse they are in other cities. Finally, Federal authorities do not see the sheer volume of drug-related crimes that local authorities do, although their violent crime caseloads may be similar to local authorities' on a proportionate basis.

Whatever the causes of the perceptual differences between local and Federal authorities over drugs' contribution to homicide, the impact on operations may be important. Perceptual differences may be significant determinants in allocating resources and establishing investigative and operational priorities. From the study, it is impossible to determine the significance and operational implications of the

difference in Federal and local drug severity assessments. Nevertheless, the finding suggests that these implications should be explored in future research.

Local law enforcement officials gave a broad range of estimates of the fraction of homicides attributable to drugs. At the low end of the range, the estimates of homicide chiefs in four cities clustered in the 30 to 40 percent range. In the remaining four cities, homicide detectives gave estimates in the 70 to 90 percent range (two cities) or the information was missing (two cities). Narcotics detectives were asked the question as well, but many declined to answer and referred the researchers to the homicide unit. In two cases where narcotics unit officials provided estimates, they were substantially higher than the corresponding homicide unit estimates. Specific figures on the numbers of homicides classified as drug related were not available. Many homicide detectives reported that they did not retain the data and that the project should refer to Uniform Crime Reports (UCRs)/Supplemental Homicide Reports (SHRs) data for the entire study period.

Generally, whatever the estimated fraction of homicides attributed to drugs, relatively few were actually counted as drug related. This discrepancy is explained by the fact that some cities have strict definitions for classifying homicides as drug involved that tend to differ from how arresting and investigating officers classify a homicide. For example, in some cities, there must be clear evidence, such as drugs found on the scene or an established drug related debt between victim and offender, for a homicide to be classified as drug involved. Perpetrator and victim toxicology results are sometimes a factor. In some cases, the final discretion is with the investigating officer. In cities where officer-defined criteria are the norm, homicide investigators consider factors such as the perpetrator's or victim's drug involvement and street rumors in forming both their official count and perceptions of the total fraction of homicides that are drug related.

Many homicide and drug unit officials reported that the fraction of drug-involved homicides was changing in the same direction as the community's underlying homicide trend. Respondents were asked how the fraction of drug-related homicides had changed over the past decade and the past 2 years. In the cases

where answers were provided, most respondents thought that long-term (10-year) and short-term (2-year) homicide trends were strongly influenced by the drug homicide component.

Use Versus Market Stability

Respondents were more likely to attribute changes in drug-related homicide and violence to the drug market stability hypothesis rather than to the drug-use hypothesis. That is, community respondents, including police officers, prosecutors, and members of the court, perceived that most changes in drug market violence were related to violence between dealers that resulted from changing market opportunities. In contrast, user-related violence was rated as more stable, albeit at relatively high levels, and less prone to fluctuation. What emerged from analyzing site reports was a complicated interaction of drug market stability and drug use and their relationship to homicide and violent crime in communities. Data reported from the sites indicated that important changes in drug markets occurred over the past decade (and longer, in some cases) and that many of these changes correlated with detectable changes in the homicide rate. Reports from the sites on these changes are presented below, followed by a discussion of their implications.

Drug Use

Respondents from all sites gave nearly undifferentiated responses regarding the use of drugs, particularly crack. Most respondents perceived that crack use in their communities was growing and that the problem had continued to grow throughout the study period. These opinions were virtually uncorrelated with the community's underlying homicide rate. Increases in cocaine use were perceived in communities whether the homicide trend was decreasing or increasing. Such perceptions tended to be widely held by diverse constituencies, including police departments, prosecutors' offices, community service groups, and emergency medical services.

Perceptions regarding drug use appear to be formed primarily from arrest and crime data, media reports, and national trends. Police, law enforcement, and

court representatives tended to cite arrest and prosecution statistics as evidence of drugs' impact in the community. Law enforcement officials, in addition to relying on law enforcement activities as a measure of drug problems, cited specific signs of disorder such as crack houses, levels of street corner activity, and general levels of neighborhood chaos as proxies for measuring drug use. In contrast, community representatives tended to cite media sources as evidence of drug use in the community. Both television and print reporting on drug-related incidents were frequently offered as evidence of a community's drug problem. Many respondents were aware of general national drug trends, particularly as reported through the media, but unaware of specific local trends. 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. Some respondents referred to national juvenile trends from the Monitoring the Future study that were discussed by the media during the interview period. Several respondents made explicit reference to these reports as an indication that local juvenile drug use was increasing. Despite these impressions, however, respondents could not name a source for local drug trend information, nor could they explicate how national trends could be related to local trends.

The inability to separate local drug-use trends from national drug-use trends or, more precisely, the lack of knowledge about specific local drug-use trends may be significant. National homicide trends typically differ substantially from any given city's local homicide trend. Local drug-use trends, like local homicide trends, can depart dramatically from the larger national trend. One important contemporaneous objective measure indicated that a subset of the study sites did in fact have differing drug-use trends. More significantly, these local drug-use trends appeared to be an important contributing explanation for local homicide trends.

Since 1987, the National Institute of Justice's (NIJ's) DUF program has obtained information on drug use from arrestees in 23 U.S. cities.⁴ The data are obtained through quarterly interviews with arrestees in jails. Self-reports of recent (72-hour) drug use are

corroborated through collection of a urine specimen that is tested for 10 drugs. Six of the eight sites in this homicide study are also DUF sites (Atlanta, Detroit, Indianapolis, Miami, New Orleans, and Washington, D.C.). Over time, there have been changes in the positive test rates for individual drugs in each study city.

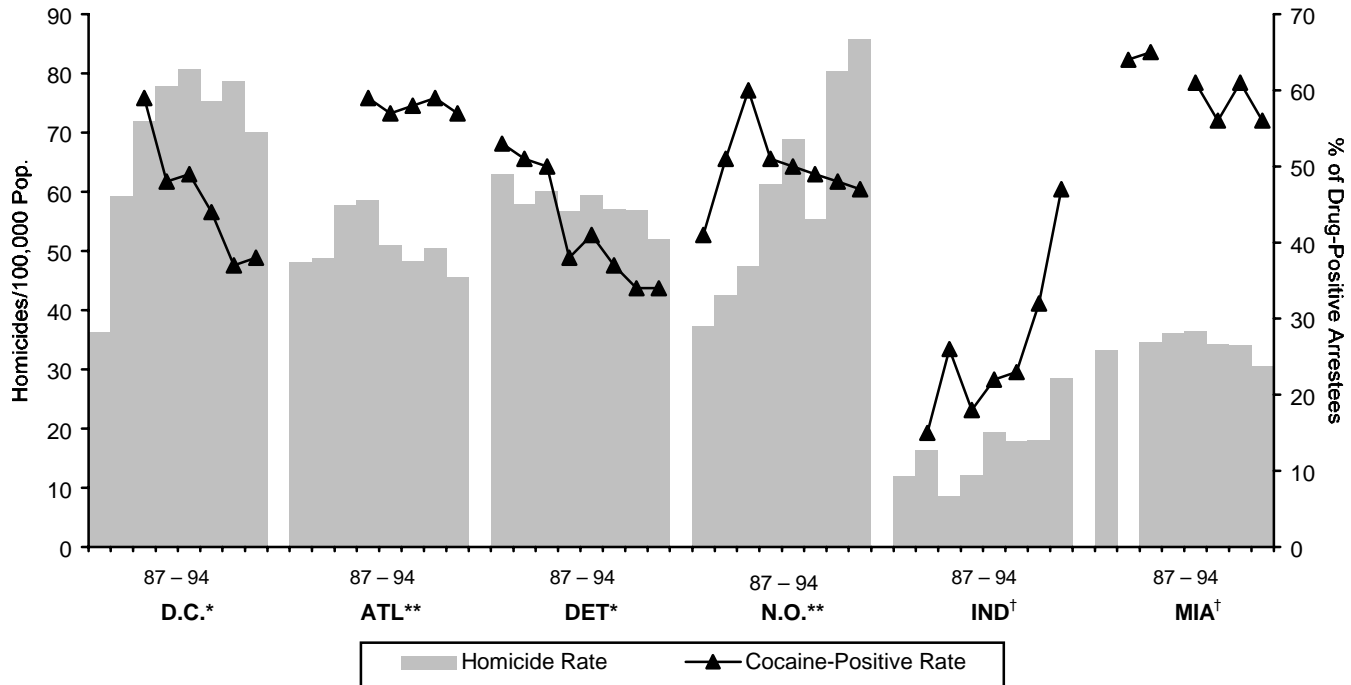
In Indianapolis, the fraction of arrestees testing positive for cocaine rose from about 13 percent in 1988 to more than 40 percent in 1994. In contrast, the fraction of arrestees testing positive for cocaine in Washington, D.C., and Detroit declined to about 35 percent in 1994 from approximately 60 percent in the late 1980s. In New Orleans, cocaine-use rates among arrestees climbed sharply between 1987 and 1989 but by 1994 had settled back to approximately the 1987 rate. Positive test rates for cocaine have held relatively constant in Miami and Atlanta, at least for the years the data were available. In contrast, positive test rates for marijuana have generally moved in a linear, upward manner since 1990 in all six of these DUF cities.

Cocaine and Homicide Trends

Most of the respondents perceived a strong relationship between drugs, particularly cocaine, and homicide in their communities. The vast majority of respondents also perceived that cocaine use continued to increase and remained a strong problem in the communities, regardless of the underlying homicide trend.

Figure 5-1 juxtaposes these two factors by comparing homicide rates with positive test rates for cocaine.⁵ In five of the six communities in which arrestee drug-testing information is available (Atlanta, Detroit, Indianapolis, Miami,⁶ and Washington, D.C.), homicide rates generally rose and fell with increases and decreases in DUF cocaine prevalence rates.⁷ The correlation between DUF-measured cocaine prevalence and homicide was strongest in Atlanta, Detroit, Indianapolis, and Miami. The relationship was weaker in Washington, D.C., although the curves generally move in the same direction, except for 1989 and 1990. The correlation between homicide and cocaine prevalence rates observed in these five cities did not hold for New Orleans throughout the study period, although figure 5-1 shows that some correlation existed at least through the late 1980s.

Figure 5–1. Homicide and Male Arrestee Cocaine Use, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, UCR homicide data are missing for one year. The study cities are abbreviated as follows: Washington, D.C. = D.C., Atlanta = ATL, Detroit = DET, New Orleans = N.O., Indianapolis = IND, Miami = MIA.

Although less evident, it is still compelling that the rate of cocaine use (prevalence), as measured through urine testing of arrestees, roughly corresponded to the level of the homicide rate. Among the study sites, higher rates of cocaine were found in communities with higher homicide rates. Communities, such as Indianapolis, that until recently had relatively low homicide rates, also showed relatively low cocaine prevalence rates.

Table 5–1 shows the bivariate correlation between homicide rates and DUF-measured cocaine-test-positive percentages among arrestees. Homicide rates and cocaine-positive percentages demonstrate a linear relationship when plotted in x,y space. Statistically significant and borderline statistically significant correlations are found in cities with both increasing and decreasing homicide trends and in cities with both linear and quadratic trends. However, correlating a rate with a percentage results in an ecological

Table 5–1. Correlation of Homicide and Male Arrestee Cocaine-Positive Percentages

City	Correlation	P-Value	N
Detroit	0.7556	0.030	8
Indianapolis	0.7105	0.074	7
Atlanta	0.6849	0.202	5
Miami	0.5179	0.371	5
New Orleans	-0.0784	0.854	8
Washington, D.C.	-0.0717	0.893	6

correlation⁸ that likely overstates the strength of the relationship. As another check on the strength of the homicide-cocaine relationship, and to check on the possible overstatement of correlation because of the ecological comparison, a simple linear regression also was performed.

Table 5–2. Regression Model of Cocaine-Positive Percentages on Homicide Rates

City	Model	R-Square	F-Statistic	Degrees of Freedom	P-Value
Detroit	linear	0.571	7.98	6	0.030
Indianapolis	linear	0.505	5.10	5	0.074
Atlanta	quadratic	0.471	2.67	3	0.201
Miami	linear	0.268	1.10	3	0.371
New Orleans	quadratic	0.300	1.07	5	0.409
Washington, D.C.	quadratic	0.287	0.60	3	0.603

Regression analysis resulted in fewer degrees of freedom because of the need to estimate parameters. Even when the results were based on a smaller number of observations, regression results illustrated a strong relationship between homicide rates and cocaine-test-positive percentages (see table 5–2). Cocaine-positive results “explain” about 57 percent of the variation in homicide rates in Detroit and 50 percent in Indianapolis. More generally, where correlational analysis showed little relationship between homicide and cocaine-positive percentages for some cities with quadratic relations, regression analysis revealed that the relationships were probably stronger than what correlation results show.

In the cases of Atlanta, New Orleans, and Washington, D.C., a quadratic model fit slightly better than a linear model. In Atlanta and Washington, D.C., the quadratic model fit better primarily because of one or two outlier years where the homicide-cocaine relationship departed from the linear model. In the case of New Orleans, however, the quadratic model fit better because the city’s data consisted of two linear homicide-cocaine models with sharply different slopes: From 1987 to 1989, homicide and cocaine demonstrated a linear relationship with a large positive slope; from 1990 to 1994, they showed a linear relationship with a small negative slope. What caused the change in slope in the relationship between homicide and cocaine in 1989 is not immediately obvious.

Homicide rates are for city boundaries, not for the larger metropolitan areas. In contrast, DUF data are

collected sometimes from catchment areas that conform to city boundaries and sometimes from larger metropolitan areas. The city and larger metropolitan populations may differ significantly and should be compared cautiously. If the DUF catchment area includes numerous small cities and suburban population centers, the arrestee sample may differ significantly from the one that would be found only inside the city boundaries. Differences in population bases are noted in figure legends. Estimates constructed from different population bases may have substantially different underlying homicide and drug-use patterns. To some extent, the impact of the different sample frames is limited because data collected under DUF encompass at most a single county that includes the city of interest.

Cocaine and the general population. Limited prevalence information on the general, as opposed to the arrestee, population was available at the city level. The Substance Abuse and Mental Health Services Administration (SAMHSA) administers the National Household Survey on Drug Abuse (NHSDA). This is a national probability sample survey designed to provide information about drug trends. Local trends can be estimated by either oversampling in specific cities of interest or developing model-based estimates. Results from a model-based estimating procedure show that the general population reports using cocaine at very low rates over the past month.⁹ Composite 1991–1993 estimates of 30-day cocaine use were available for six of the eight study sites. No estimates were available for Richmond and New Orleans, nor

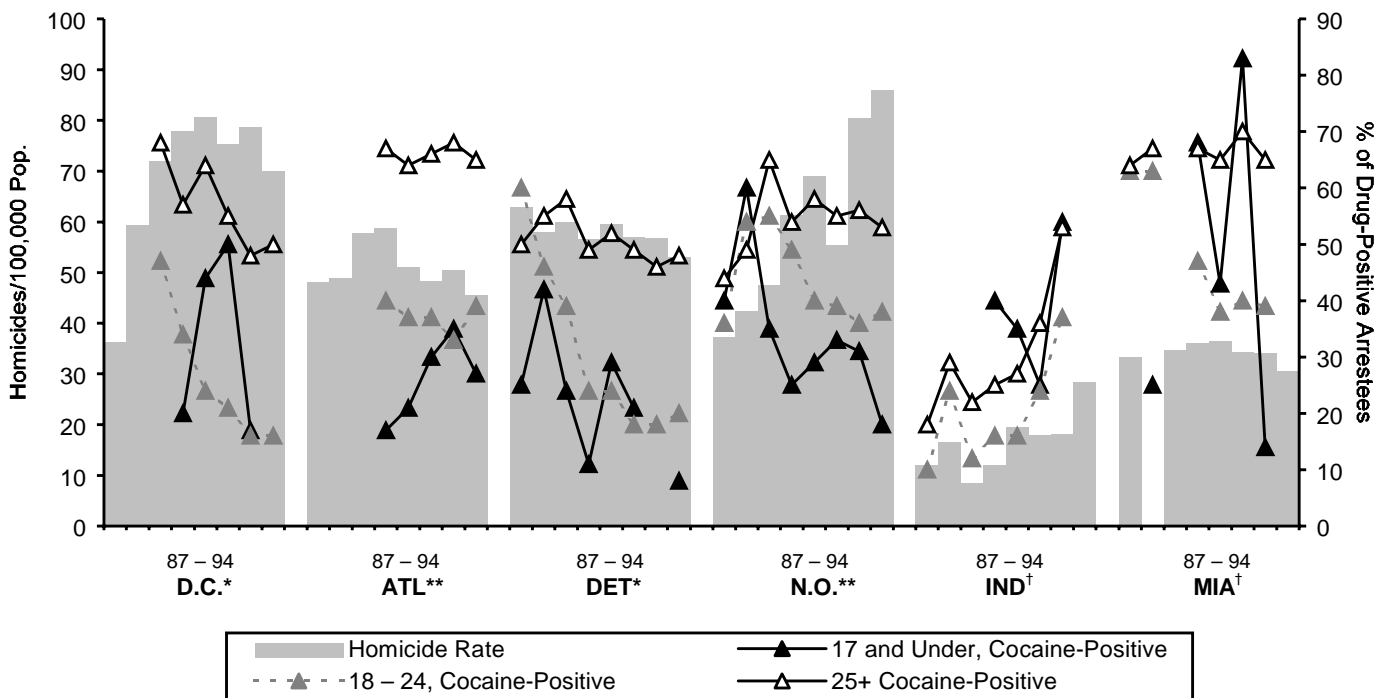
were model-based estimates available for 72-hour use. (Urinalysis has an approximate 72-hour window of detection, and thus, DUF cocaine-test results would be most closely comparable with NHSDA self-reports of drug use in the past 72 hours.) The highest estimate for 30-day cocaine use was 1.03 percent of the population in the Washington, D.C., area; the lowest estimate was 0.57 percent in the Tampa-St. Petersburg area.

These estimates were not directly comparable with the DUF data for several reasons. First, only point, not trend, data were available for the cities.¹⁰ Second, the estimates were constructed from Metropolitan Statistical Areas (MSAs), which typically include several counties. Drug-use and homicide patterns may not be distributed evenly throughout MSAs; patterns of surrounding counties may differ substantially from those of the city itself. For the purposes of this analysis, the model-based estimates provided little information, but they did show that beyond the arrestee population there appeared to be very low rates of cocaine use in major cities.

Age, race, cocaine, and homicide. When stratified by age group, the relationship between homicide and arrestee cocaine-test-positive results appeared strongest in the 18 to 24 and 25+ age brackets (see figure 5–2).¹¹ The degree to which test-positive percentages and homicide correlated across age cohorts suggests that the relationship was rooted in an environmental phenomenon that affected multiple age cohorts simultaneously. Whatever the relationship between cocaine and homicide—be it drug use, drug market stability, or some combination of the two—the link does not appear to have been slowly transmitted through the community but, rather, developed abruptly across groups.

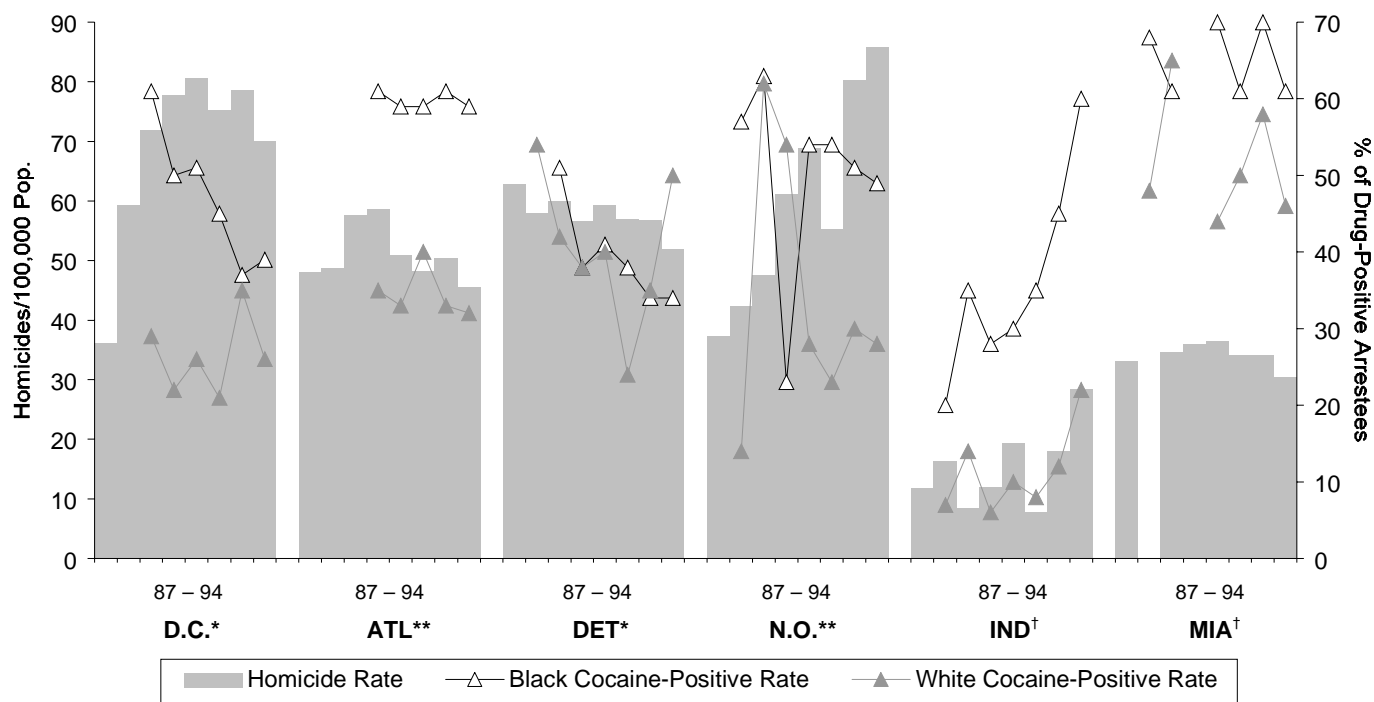
Cocaine-positive trends generally followed the same patterns for all age groups. Figure 5–2, however, shows that declines in cocaine-positive percentages were sharper in the middle age bracket (18 to 24) than in the older bracket (25+) and that increases were typically sharpest in the middle age bracket. In addition, the oldest age bracket’s members typically test

Figure 5–2. Homicide and Male Arrestee Cocaine Use, by Age, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).
Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, UCR homicide data are missing for one year.

Figure 5–3. Homicide and Male Arrestee Cocaine Use by Race, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).
Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, UCR homicide data are missing for one year.

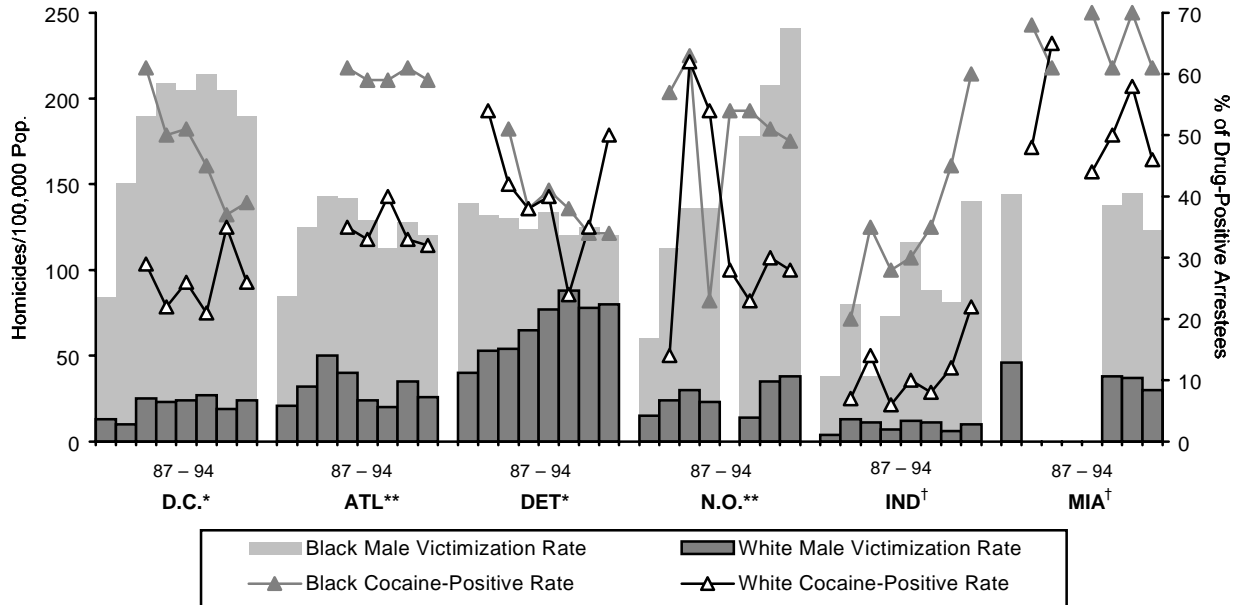
positive for cocaine at higher rates than the other brackets. Both points are consistent with the notion that crack use is currently dominated by an aging cohort of heavy users.¹² The recent increases in test-positive percentages among juveniles age 17 and under in Atlanta (not withstanding the 1994 decrease) and Indianapolis may be potential points of concern. They are signals that a new cohort with a high prevalence of cocaine use and all the attendant problems may be appearing in the community.

An examination of the data broken down by race of arrestees provides additional insights (see figure 5–3). In both Detroit and Washington, D.C., changes in the fraction of black arrestees testing positive for cocaine mirrored changes in the homicide rates. In contrast, the fraction of white males testing positive for cocaine increased (Detroit) or held relatively steady (Washington, D.C.) in recent years despite a declining homicide trend in those two cities. Both Washington, D.C., and Detroit are majority black cities, and whites

represent a small fraction of the total and arrestee populations. In Atlanta and Indianapolis, both black and white arrestees' cocaine-positive rates moved in concert with the homicide trend. Miami's cocaine-positive rates, when broken down by race, were more varied than the other communities'; thus, it is difficult to discern an underlying pattern. Grouping by race provided little additional insight about New Orleans.

When cocaine-positive rates are broken down by age and race categories and compared with age- or race-specific homicide victimization rates, clear correlations appear. Figure 5–4 shows the relationship between victimization and testing positive for cocaine by race; figure 5–5 presents the relationship by age.^{13, 14} When the fraction of white male homicide victims increases, so too does the arrestee cocaine-positive rate for white males. Comparing homicide rates with DUF percentages reveals that some relationship between homicide and cocaine use is apparent, but the aspects of homicide (victim and offender) that relate

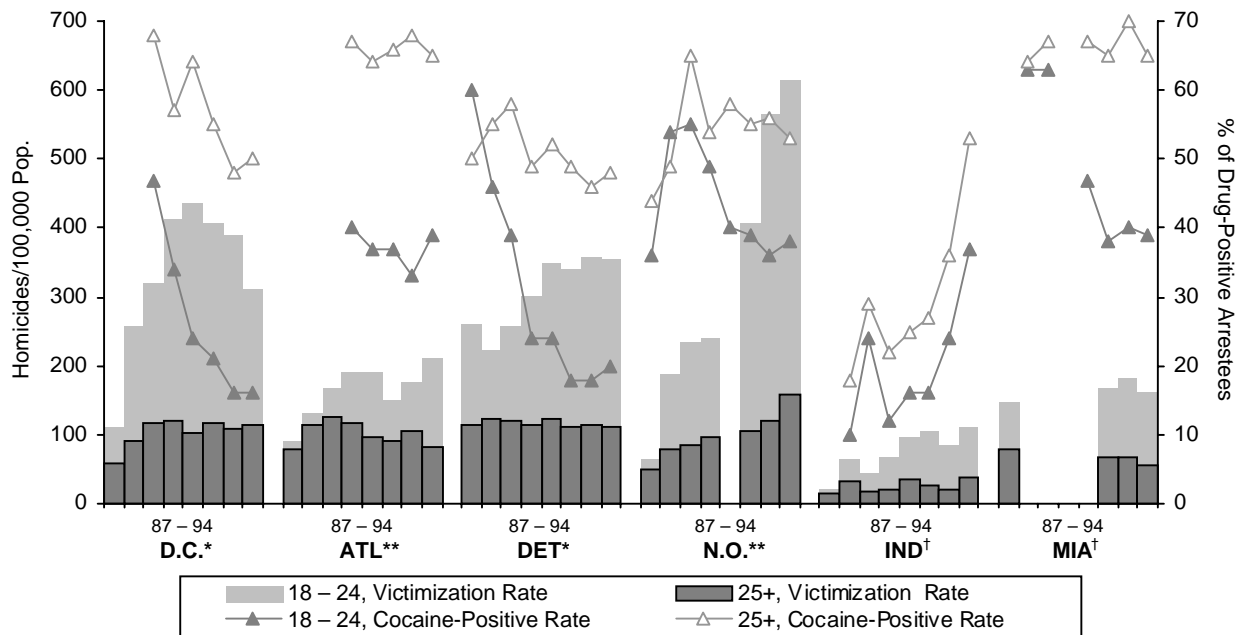
Figure 5–4. Race-Specific Victimization and Male Arrestee Cocaine Use, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, victimization data are missing for several years; in New Orleans, for one year.

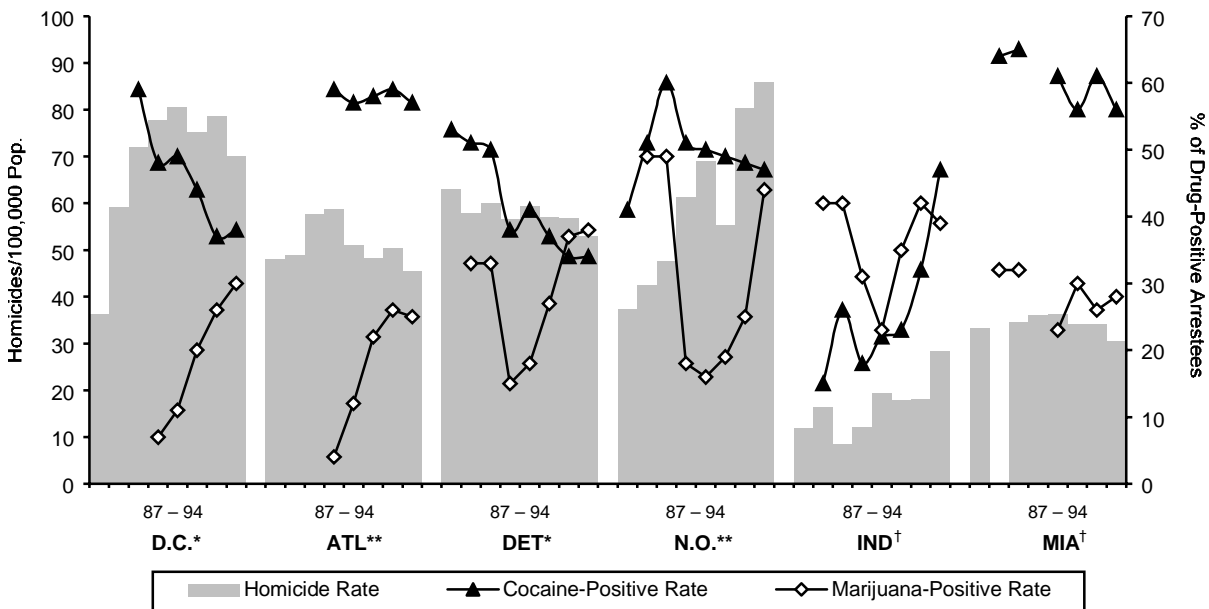
Figure 5–5. Age-Specific Victimization and Male Arrestee Cocaine Use, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, victimization data are missing for several years; in New Orleans, for one year.

Figure 5–6. Homicide and Marijuana Use by Male Arrestees, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, UCR homicide data are missing for one year.

to drugs (use or market size) are not entirely clear. Comparing victimization rates to DUF percentages more clearly isolates the intersection between drug use and being a victim of homicide. In other words, the relationship between drug-test-positive rates and homicide may be as much about victims and the risks that participating in drug markets entails as it is about perpetrators and drug use.

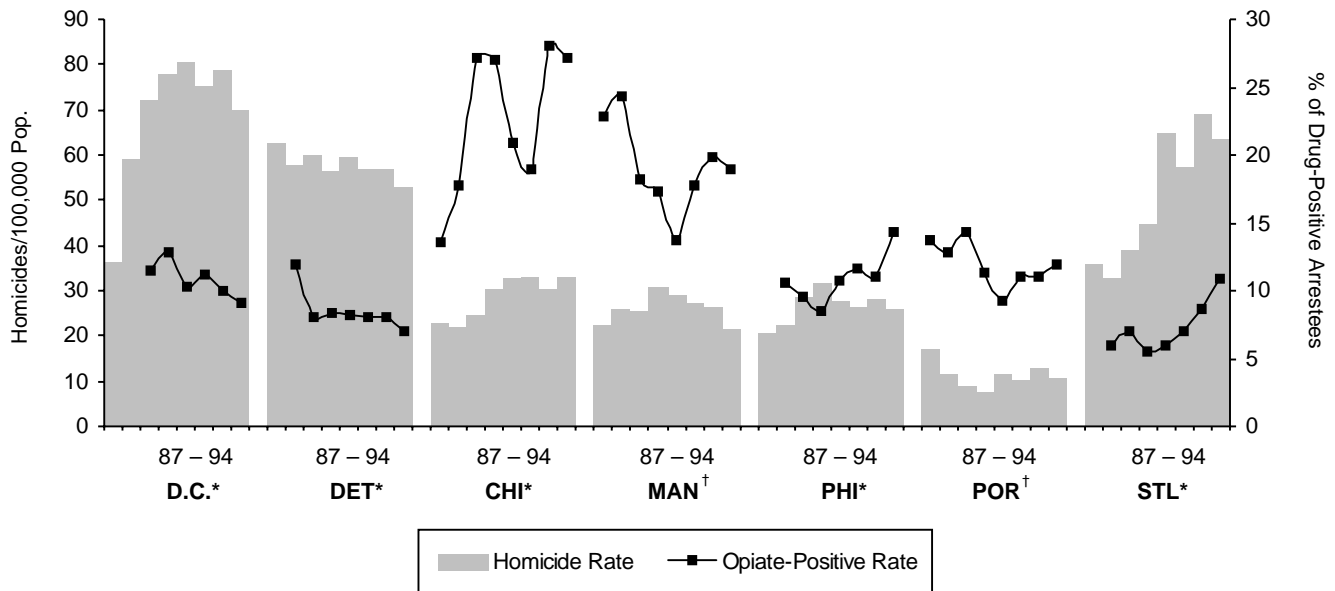
Other Drugs and Homicide Trends

Marijuana. In contrast to cocaine, marijuana did not appear to have the same relationship to homicide. The lack of correlation between homicide and marijuana held true even in communities where marijuana had a higher prevalence rate than cocaine (see figure 5–6). There is little in the way of theory and analysis that would support a link between marijuana and violence, despite anecdotal reports from some study sites about growing violence in marijuana retailing. While marijuana markets may be undergoing a transition that is affected by changes in crack markets, little historical evidence demonstrated a link between violence and marijuana.

Heroin. Evidence for heroin was more mixed. The volume of evidence linking heroin to violence was relatively thin.¹⁵ During previous heroin epidemics, heroin problems remained confined to a few cities. Thus, the research base was correspondingly smaller. Current evidence on the link between heroin and violence remains thin. This is because heroin remains more geographically confined than crack, powder cocaine, and marijuana and because most policy-driven research has been devoted to crack.

Among the homicide study sites that are also DUF sites, only Washington, D.C., and, to a much lesser extent, Detroit, could be demonstrated to have had significant, continuing opiate problems.¹⁶ Other cities, including Chicago, New York (Manhattan), St. Louis, Portland, and Philadelphia, demonstrated similar sustained problems with opiates or recent, strong growth in opiate use.¹⁷ When homicide trends were compared to opiate-use rates in two homicide study sites that had high opiate use among arrestees and in the other high-opiate-use cities, a pattern emerged. Figure 5–7 summarizes the homicide and opiate-positive trends in two homicide study sites (Detroit

Figure 5–7. Homicide and Opiate Use by Male Arrestees, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county). For instance, DUF data are collected in Manhattan, but homicide data are drawn from New York City.

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. The cities are abbreviated as follows: Washington, D.C. = D.C., Detroit = DET, Chicago = CHI, Manhattan = MAN, Philadelphia = PHI, Portland = POR, St. Louis = STL.

and Washington, D.C.) and in five other communities with high opiate-use rates.

At first glance, figure 5–7 appears to demonstrate a relatively significant relationship between opiates and homicide, particularly in Detroit, St. Louis, and Portland. Washington, D.C., and Chicago exhibited weaker but still potentially significant relationships. The apparent correlation, however, is misleading because a significant interaction between opiates and cocaine confounds the analysis. Across the 8 years of overlap between DUF operations and the homicide study period, an average of 77.6 percent of those who tested positive for opiates also tested positive for cocaine. In every city, more than half of those who tested positive for opiates in any one year also tested positive for cocaine. In several cities, more than 80 percent of the arrestees testing positive for opiates also tested positive for cocaine (see table 5–3). These findings indicate that in this population at least, opiate users were largely a subgroup of cocaine users.

Table 5–4 confirms that while opiate users were largely (in the context of this study and population) a subset of cocaine users, the reverse did not hold true. Only about 15 percent of confirmed cocaine users also were confirmed opiate users, although the percentages varied substantially by city. In St. Louis, the average percentage of cocaine users who also used opiates was about 11 percent from 1987 to 1994; in Chicago, where the figure exceeded 40 percent in 1993, the average from 1987 to 1994 was about 32 percent. This table suggests that the cocaine-using population is much larger than the opiate-using population.

Combined, tables 5–3 and 5–4 reveal that the apparent relationship between heroin use and homicide is more likely a function of cocaine use. Heroin use correlates with homicide because heroin use is largely a subset of cocaine use. Although it is possible that heroin exerts an independent effect on homicide that is masked by the overlap of heroin and cocaine, this is unlikely. The heroin-using population is very small

Table 5–3. Percentage of Opiate-Positive Arrestees Testing Positive for Cocaine

Site	1987	1988	1989	1990	1991	1992	1993	1994	City (Mean)
Chicago	77.8	78.3	80.7	73.4	83.9	82.9	80.3	81.2	79.8
Detroit	61.9	62.9	76.8	63.2	65.7	71.6	70.6	64.7	67.2
New York	70.5	81.9	93.2	87.9	88.4	79.7	84.4	88.0	84.3
Philadelphia	n/a	91.9	90.3	82.3	80.0	83.1	77.0	74.0	82.6
Portland	74.1	65.9	75.4	57.4	60.0	78.7	66.7	59.1	67.2
St. Louis	n/a	78.6	81.8	67.3	83.6	69.4	70.8	72.2	74.8
Washington, D.C.	n/a	n/a	90.7	82.8	83.7	74.3	71.3	72.6	79.2

Table 5–4. Percentage of Cocaine-Positive Arrestees Testing Positive for Opiates

Site	1987	1988	1989	1990	1991	1992	1993	1994	City (Mean)
Chicago	21.4	24.1	37.1	36.6	28.6	27.9	42.2	38.8	32.1
Detroit	13.4	14.8	12.6	13.7	13.0	16.2	15.9	14.1	14.2
New York	24.3	27.0	23.5	23.4	19.8	22.7	25.4	24.5	23.8
Philadelphia	n/a	13.5	11.7	10.7	13.7	15.4	15.0	19.7	14.2
Portland	32.8	21.0	29.3	30.3	18.7	24.6	22.2	21.7	25.1
St. Louis	n/a	11.8	11.6	8.7	10.2	9.7	12.2	15.7	11.4
Washington, D.C.	n/a	n/a	17.5	22.3	17.4	19.1	19.6	17.3	16.2

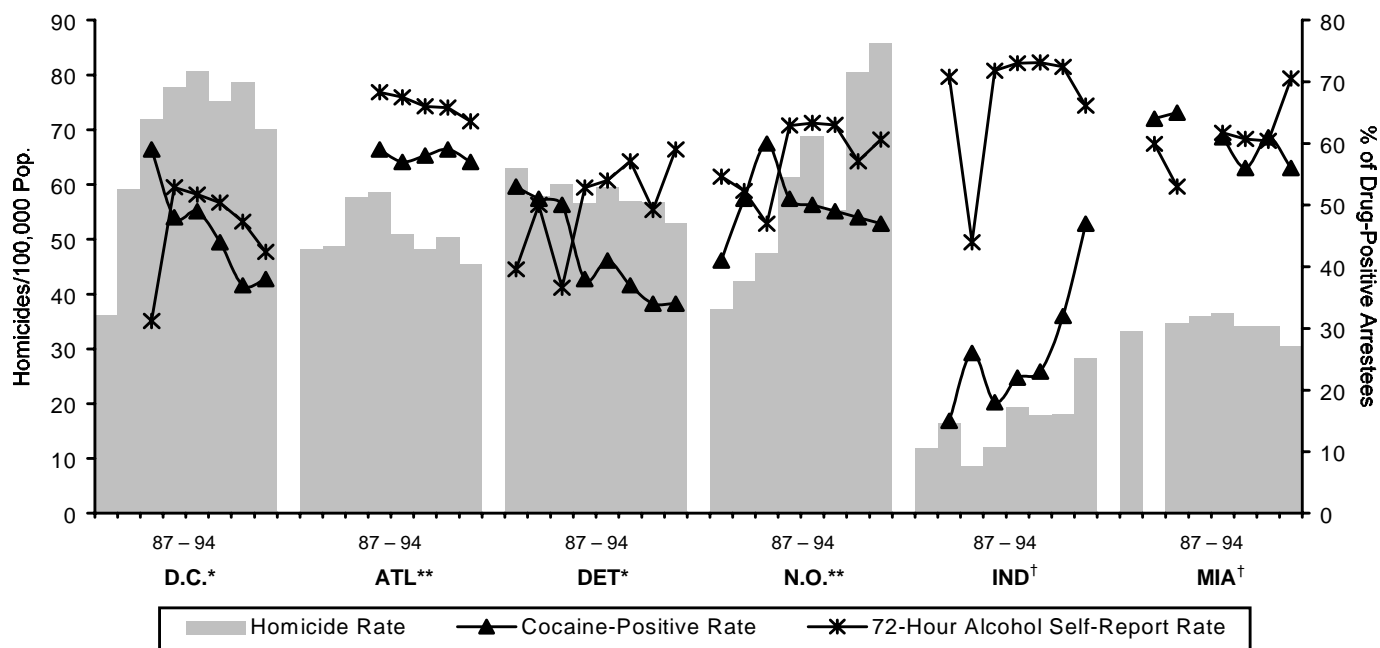
relative to the cocaine-using population. Because the cocaine-using population is so much larger and the relationship to homicide holds in this population, this strongly suggests that cocaine is the driving factor.

Methamphetamine. Methamphetamine is confined to relatively few DUF sites. Moreover, methamphetamine remains a minor problem in all of the homicide study sites. Law enforcement officials report that they detect growing problems with methamphetamine in Atlanta and Tampa. To date, however, available monitoring instruments show very low methamphetamine prevalence rates outside the Western United States. The homicide study was not conducted in any western U.S. cities where methamphetamine is a problem. An analysis of methamphetamine and

homicide is presented in appendix 5–B (see page 113).

Alcohol. Alcohol is another substance that is widely abused. Moreover, unlike most illicit substances, alcohol has been linked to aggressive behavior.¹⁸ Thus, it is important to analyze alcohol’s relationship to homicide and homicide trends. DUF data can be used to examine alcohol’s relationship to homicide but in a more limited context than the cocaine-homicide relationship. DUF data on alcohol are based on self-reports, not on drug test results. Alcohol metabolizes very quickly in the body and cannot reliably be detected beyond 8–12 hours after use. DUF cannot routinely provide access to arrestees during this

Figure 5–8. Homicide and Self-Reported Alcohol Use by Male Arrestees, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, UCR homicide data are missing for one year.

window of detection. Consequently, interviewers can ask about recent alcohol use, but they cannot test for it.

Because alcohol-use data are based on self-reports, there is reason to suspect that interviewees understate recent alcohol use just as they understate other drug use. The degree to which alcohol self-report data are more reliable than self-report data for other drugs is unclear. Factors such as age, perceived consequences of admitting use, stigma, and illegality can affect self-reporting. Younger respondents generally provide less truthful information about substance abuse than older respondents.¹⁹ Alcohol can be obtained from retail stores and outlets without fear of law enforcement intervention. Unlike with illegal drugs, few consequences result from admitting alcohol use except under narrow circumstances, such as driving while intoxicated. The penalties for admitting alcohol use are also relatively modest and largely confined to sanctions against driving privileges. There is some stigma attached to alcohol use, but the effect appears to be modest relative to other drugs, and it generally

appears under more specific circumstances such as spouse abuse. Generally, the expectation is that self-reports on alcohol are more reliable than self-reports on other drug use. However, evidence on the reliability of alcohol self-reports, particularly among arrestees, is scarce.

Most research on the reliability of self-reporting is conducted in household or student populations that may differ substantially from arrestees in their willingness and ability to self-report accurately. Recent work in which the validity of self-reporting has been confirmed with drug testing shows that, for recent (72-hour) use of marijuana, cocaine, and heroin, arrestees were most likely to be truthful about marijuana use and least likely to be forthcoming about cocaine use.²⁰ If fear of negative legal consequences and social stigma are dominating factors in determining the truthfulness of self-reports, then reporting on alcohol may be better than that of marijuana. However, work evaluating self-reporting in general populations showed that reporting on alcohol was both more and less consistent than reporting on other

Table 5–5. Percentage of Arrestees Testing Positive for Cocaine Who Also Reported Recent Alcohol Use

Site	1987	1988	1989	1990	1991	1992	1993	1994	City (Mean)
Atlanta	n/a	n/a	n/a	73.4	74.3	73.4	73.5	71.2	73.2
Detroit	46.4	59.9	42.9	59.7	64.4	66.3	53.0	78.2	58.9
Indianapolis	n/a	65.0	49.5	82.0	84.2	81.3	79.9	69.7	73.1
Miami	n/a	62.1	59.3	n/a	68.1	69.9	67.7	78.6	67.6
New Orleans	50.0	56.6	50.4	67.3	69.9	72.4	68.6	67.5	62.8
Washington, D.C.	n/a	n/a	33.5	50.1	60.4	61.6	59.6	58.4	53.9

Table 5–6. Percentage of Arrestees Reporting Recent Alcohol Use Who Also Tested Positive for Cocaine

Site	1987	1988	1989	1990	1991	1992	1993	1994	City (Mean)
Atlanta	n/a	n/a	n/a	36.5	62.7	64.5	66.1	64.2	58.8
Detroit	62.5	61.2	58.4	43.1	49.2	43.0	36.5	45.2	49.9
Indianapolis	n/a	14.1	29.8	20.0	25.4	25.5	34.9	49.8	28.5
Miami	n/a	66.1	72.8	n/a	67.1	64.9	68.7	62.1	67.0
New Orleans	37.3	55.4	64.0	54.7	55.6	56.4	57.5	51.9	54.1
Washington, D.C.	n/a	n/a	63.6	50.9	57.7	53.2	46.1	52.6	54.0

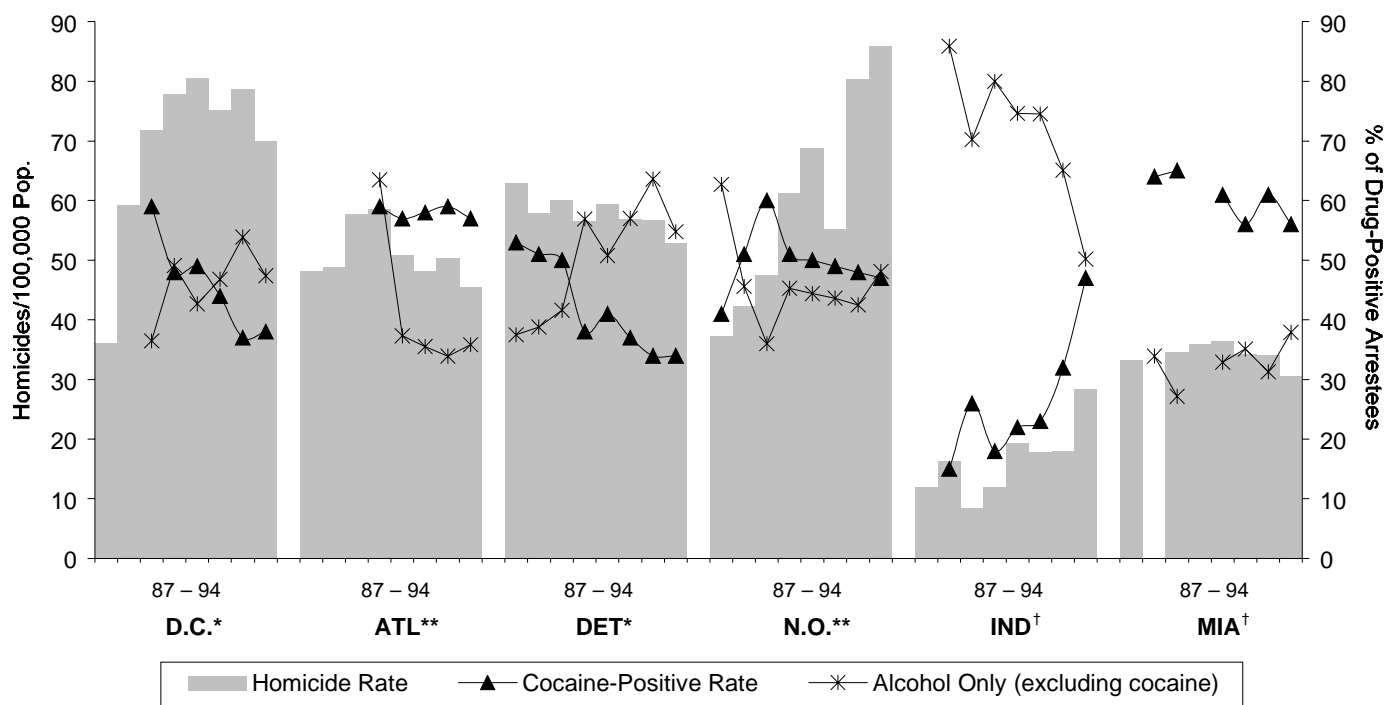
drugs, depending on the timeframe considered.²¹ This study did not consider recent (3-day) use and did not validate claims of repeated use with an independent measure (such as a drug test); rather, it measured the consistency of self-reports for 30-day and 1-year horizons using repeat measures.

Since there is little basis to judge the validity of self-report data on alcohol, analyses based on such data should be interpreted cautiously. Figure 5–8 compares reports of recent alcohol use among male arrestees to homicide rates.²² Several factors are evident. First, alcohol prevalence is very high among arrestees and generally higher than confirmed recent cocaine use. Second, 72-hour alcohol self-report rates have generally not moved as sharply as cocaine use, the sharp drop in alcohol self-reports across all cities in 1989

notwithstanding.²³ Atlanta and Washington, D.C., have shown sustained declines in alcohol self-reports that correspond with changes in homicide trends; however, the alcohol self-report trend runs counter to the homicide trend in Detroit and Indianapolis. Appendix 5–B: Supplement to Homicide and Drug Analyses considers homicide and alcohol self-reports from other DUF cities (see page 113).

Given the limits of self-reporting described above, particularly among arrestees, it was difficult to draw strong conclusions about the relationship between self-reports of alcohol use and homicide shown in figure 5–8. The high prevalence rates associated with alcohol use suggest it may be a risk factor relating to homicide. As with heroin, cocaine use overlaps significantly with alcohol use. However, in the case

Figure 5–9. Homicide and Self-Reported Alcohol Use (Excluding Cocaine) by Male Arrestees, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, UCR homicide data are missing for one year.

of alcohol use, the overlap runs in both directions. Those who self-report alcohol are highly likely to test positive for cocaine (65 percent, mean from table 5–5), and those who test positive for cocaine are likely to self-report recent alcohol use (49 percent, mean from table 5–6). Because the alcohol- and cocaine-using groups largely overlap, it is difficult to untangle the relationship. If alcohol had a relationship to homicide independent of cocaine, then there should have been a correlation between homicide and those self-reporting alcohol use but testing negative for cocaine. As figure 5–9 demonstrates, reports of recent alcohol use among noncocaine users did not correlate with homicide.

Nevertheless, the results from Atlanta and Washington, D.C., the results presented in the tables and graphs in this section along with the results presented in appendix 5–B suggest the need to further examine alcohol’s relationship to homicide. This relationship should be examined both within and outside of the context of cocaine.

Drugs and Domestic Violence

Numerous respondents perceived a link between substance abuse and domestic violence. Although crack was frequently implicated as a factor in such situations, it was far from the only substance that was mentioned in connection with domestic violence. Alcohol, powder cocaine, marijuana, and other substances were mentioned as factors in the context of domestic violence. One official involved in public housing security said that after they cleaned gangs and drug dealing out of a number of housing units, domestic violence was one of the largest problems remaining.

Although drug use was mentioned in the context of domestic violence, most respondents distinguished between drug-involved domestic *violence* and drug-involved domestic *homicides*. Respondents generally thought substance abuse was a causal factor in child abuse and neglect, battery and assault, and other violent acts, but that these instances rarely translated into homicide. Moreover, few respondents perceived

domestic homicides to be a significant component of the overall homicide picture. This perception is supported by the data presented in the macro sections (chapters 3 and 4), which illustrated that a relatively low percentage of homicides are intimate family homicides.

Although the responses noted above generally correspond with the facts, they tell only part of the story. Figure 5–10 shows total female victimization rates compared to various categories of substance abuse. Although domestic violence victimizations constitute a substantial share (4 to 24 percent) of total female homicides, figure 5–10 shows total female victimization, not just domestic victimizations. The numbers of female victimizations that can be classified as domestic or intimate/family are very small, ranging from an average of 4 per year in Tampa to nearly 18 per year in Detroit over the study period. Because a large fraction of homicides cannot be classified by perpetrator and the number that are classified as family related are so small, overall female victimization rates were used. There is little correlation between drug use by either male or female arrestees and female homicide victimizations. However, when female arrestee drug use is compared to overall homicide trends (figure 5–11), the relationship between homicide and cocaine holds. This suggests that although the cocaine-homicide link is more prevalent among men, it exists for women as well.

Drug Market Stability

As noted earlier, drug market stability can be described along several dimensions. Stability can occur with respect to competitive structure such as competition or a monopoly. Transitions from one market type to another may be marked by instability. Certain types of competitive market structure, particularly the pure competition model of numerous sellers competing on price and quality, are thought to be highly prone to instability, with violence as a mechanism for controlling competitors' entry and defending market segment. Similarly, markets can be stable in the structure of transactions. Prices are one important indicator of transaction structure. Other transaction types thought to have particular links to stability and instability include street-corner sales, territory-based sales, and

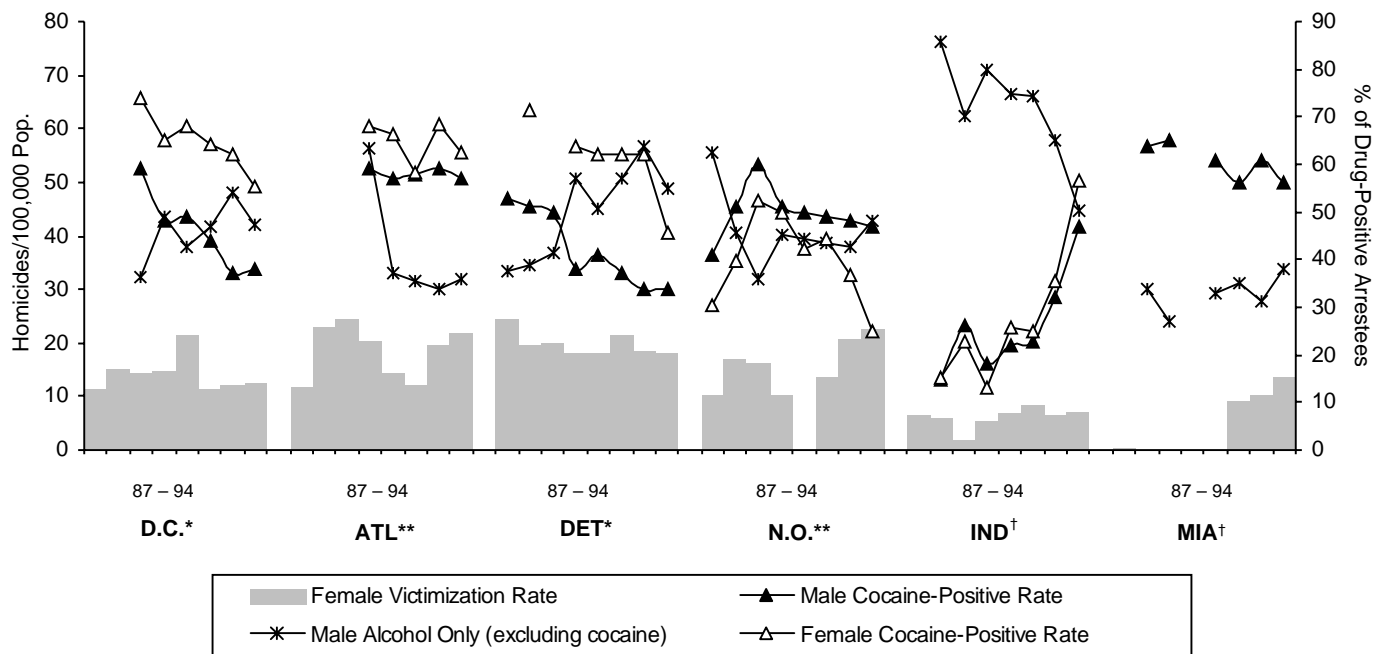
crack-house sales. Markets can also be stable in terms of participants. Policies such as policing practices can influence the other components of stability. The descriptions below illustrate a range of stability issues encountered at the study sites.

Competitive structure and stability. Law enforcement officials in Detroit characterized the early stages of their drug markets, particularly cocaine markets, as dominated by a limited number of small groups. Detroit's cocaine and marijuana markets of the late 1970s and early 1980s (periods not generally covered in the study) were described as dominated by several organizations such as Young Boys Incorporated (YBI). YBI was highly disciplined and regimented and had a virtual monopoly on retail drug sales in Detroit through the early 1980s. Despite their strong influence over retail drug markets in Detroit, YBI used violence to maintain control according to Detroit respondents. Detroit Police Department officials reported that YBI members were suspects in numerous murders and violent incidents, some involving discipline of their own members and others involving efforts to eliminate or intimidate rivals.

In the early and mid-1980s, Detroit law enforcement authorities succeeded in breaking up the main trafficking organizations, including YBI, that were believed to control narcotics trafficking in the area. Other organizations rapidly moved in to claim a fraction of the retail market as YBI's leaders were prosecuted. By 1985, the beginning of the study period, hundreds of small organizations sold drugs in the Detroit retail market. Authorities in Detroit characterized the market as an extremely competitive one, in which "everyone is a crack dealer." Although the trade was dominated by open-air sales, numerous crack houses existed as well. Throughout the study period (1985–1994) when Detroit's retail cocaine monopolies were being dismantled and highly competitive retail markets were being established, Detroit's homicide rate slowly declined.

Similar success against a dominant trafficking organization was recorded almost a decade later in Indianapolis. This suggested that the crack problem emerged earlier in Detroit than in Indianapolis, which was confirmed by respondents' reports about the development of the crack cocaine phenomenon in

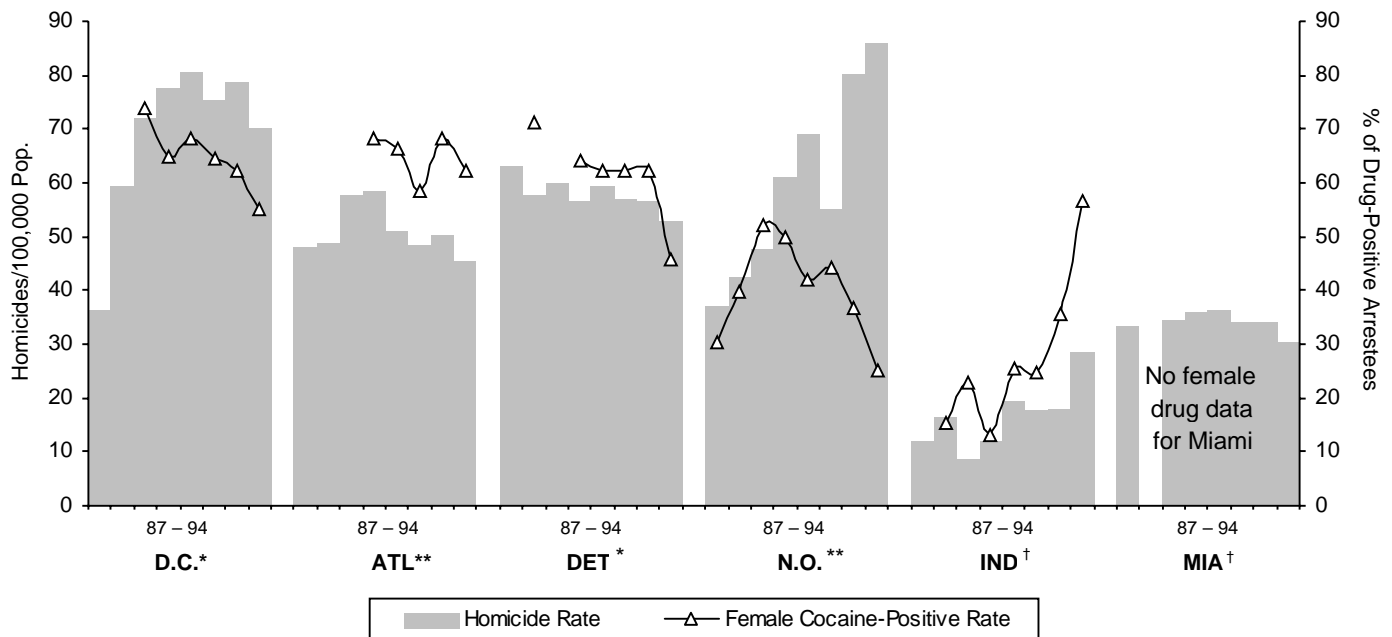
Figure 5–10. Female Homicide Victimization and Drug Use, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, victimization data are missing for several years; in New Orleans, for one year.

Figure 5–11. Homicide and Female Arrestee Cocaine Use, 1987–1994



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, UCR homicide data are missing for one year.

their communities. Through 1991, Indianapolis officials reported that retail drug sales in that city were dominated by the Black Gansta Disciples (BGD), also known as the Ghetto Boys. A joint Federal and local effort resulted in prosecutions that eliminated much of the group's hold over retail sales in Indianapolis, particularly in public housing. This effort, combined with vigorous implementation of the crack house destruction program as part of Operation Weed and Seed, displaced much of the crack trade and its leadership in Indianapolis.

Authorities reported that the Indianapolis crack trade became more competitive, with numerous new participating organizations after the enforcement actions against BGD. Numerous crack houses were reported to exist, but many that formerly operated in public housing had at least temporarily been displaced. At approximately the same time these crack market changes were occurring, Indianapolis' homicide rate began to increase. The homicide rate climbed during the period when the major trafficking organization was disrupted and continued to climb after the market became more fractured and dispersed.

Drug markets in Miami have been structured differently than in most of the other study sites. Miami is a major national distribution center and the Miami region is home to many national trafficking and wholesale syndicates. The earliest stages of cocaine distribution in Miami were marked by conflict over national distribution networks. The bloody cocaine wars that made Miami infamous in the early 1980s were primarily between wholesale dealers and were marked by extreme public violence. Much of the battle in the early 1980s was among Colombian traffickers over who was going to control distribution to much of the rest of the United States.

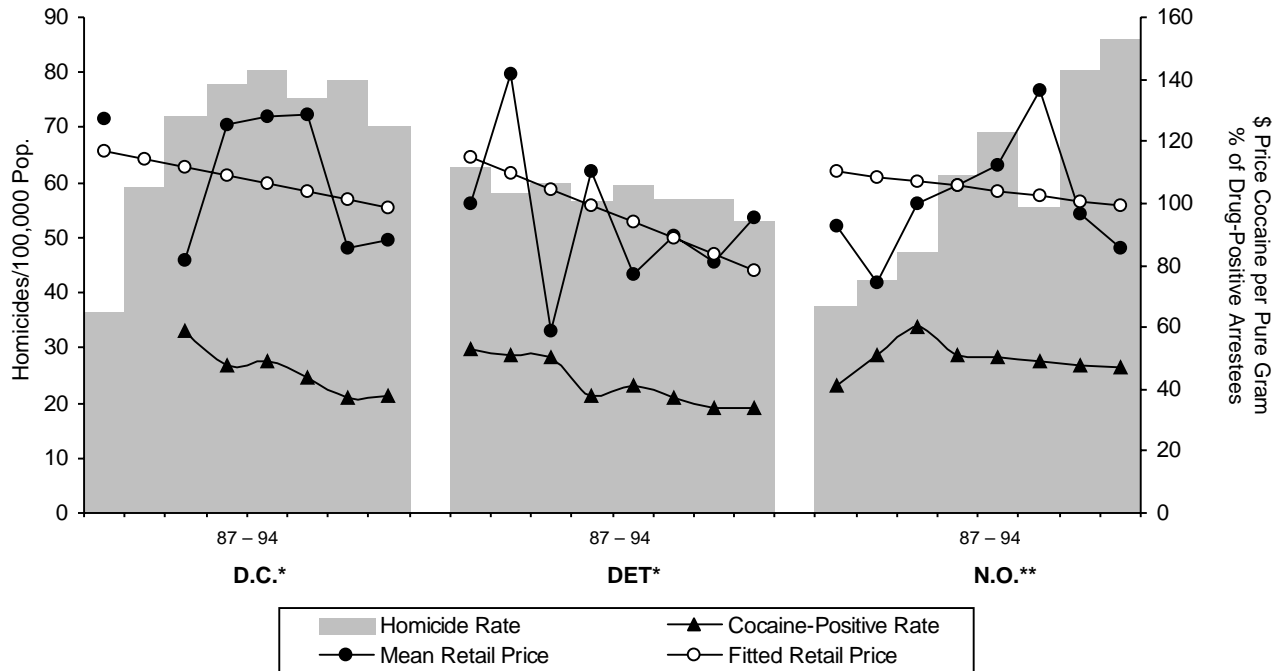
Since the settlement of Miami's cocaine wars in the mid-1980s, retail drug transactions have dominated the situation. Officials characterized the Miami drug trade as very competitive, with a large number of outdoor transactions. They noted that a sizable portion of the retail trade catered to tourists and other transient traffic. After the wholesale trafficker wars of the early 1980s and during this period of retail expansion, Miami's homicide rate remained relatively stable.

The above anecdotes illustrate the flexibility and adaptability of drug markets in these communities and provide an overview of the structural and operational stages through which drug markets may pass. Crack markets were described as highly competitive, street corner-oriented markets in which most transactions were relatively anonymous. This was true whether the city's homicide rate was declining (Detroit), increasing (Indianapolis), or holding relatively constant (Miami). These descriptions of competitive market structures imply that competition itself may not have been a driving force with respect to homicide. Other aspects of market stability, including transaction stability, buyer-seller stability, and intervention stability, should be further examined as market instability-driven causes of homicide.

Prices and transaction stability. Price measures provide information about some facets of market stability. It is not clear whether declining or rising prices would be most closely associated with market instability. Declining prices can be a signal of limited profit opportunities and an oversupply of dealers relative to demand. Climbing prices, in contrast, can serve as a signal for dealer entry. Declining prices could result in instability if dealers fought to keep customers or used violence to eliminate rivals, or if low prices attracted a large number of new users. On the other hand, rising prices could provoke instability if dealers fought for retailing territory or if users changed their behavior to support their habit. How price changes would manifest themselves in a given community would likely depend largely on local market circumstances. Markets in which dealers faced no particular barriers to exit would probably be less likely to be destabilized by price decreases. Characteristics of such markets might include a high preponderance of dealers who derived a limited portion of their income from drug dealing and who had connections to legal means of employment.²⁴

Beyond the perceptual information gathered from site representatives, few measures of market stability were available. One measure of transaction stability could be drawn from the System to Retrieve Information from Drug Evidence (STRIDE) data collected by the Drug Enforcement Administration. These data included measures of price, purity, and size of transac-

Figure 5–12. Homicide Rates and Retail Cocaine Prices, 1987–1994



Homicide and DUF data drawn from: *same population, **similar populations.

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years in Washington, D.C.

tions for marijuana, heroin, and cocaine. Although many STRIDE transactions represent seizures, a sizeable fraction involve local, State, and Federal undercover purchases that result in price information.²⁵

Figure 5–12 shows homicide rates compared to retail cocaine prices in the study cities.²⁶ Cocaine prices during the study period were highly variable despite a general downward trend. Volatility in cocaine prices could be a signal of underlying instability such as a change in market structure or an imbalance between buyers and sellers.²⁷ Generally, it appeared that homicide trends moved in the same direction as retail cocaine prices in study sites for which sufficient data were available. The movement of retail cocaine prices in a loose relationship with homicide rates would appear to support the market structure and market stability arguments. Under this scenario, as cocaine prices climbed, new dealers were drawn to retailing.

One unfortunate (from the standpoint of intuition) implication of this finding, however, was that cocaine-positive rates increased as cocaine prices

increased. Previous research has shown that this would not be likely to be the case among a general population, although less is known about the interaction between prices and demand in an arrestee population.²⁸ One plausible hypothesis, for example, is that rising cocaine prices caused users to commit acts that increased their likelihood of arrest. Under such a scenario, rising prices would not have increased the quantity of cocaine demanded or the number of users but simply increased the odds that an individual would be captured in an arrest-based dataset. For this scenario to be true, however, cocaine prices would have to exert a strong influence over criminal acts. Because only a small fraction of crimes results in arrest, small increases in criminal activity are not likely to be reflected in arrest statistics.

A second, plausible hypothesis that would explain a relationship among rising prices, increased prevalence of cocaine use in an arrestee population, and homicide is that rising prices may have forced an increase in smaller quantity transactions. That is, as prices rose,

users either were forced out of the market or adapted their buying practices to make a greater number of lower priced transactions. Buying in smaller units would help the user manage the increased costs but still participate in the market. However, buying in smaller units might also have led to an increase in transactions if the user maintained the same daily level of consumption but simply acquired the drug in smaller, less costly increments. If users responded to price increases in such a manner, there would have been substantial changes in risk that would help explain increases in arrestee prevalence rates in the face of price increases. As the number of transactions increased, the risk of arrest to any individual purchaser increased, however slightly. With more purchases, the user was more vulnerable to observation, chance police raids, and other factors. Moreover, given a sufficient volume of users who respond to price increases by atomizing their purchases, community members might respond by calling for tighter patrolling of drug markets. The cumulative effect may have been that more drug users were arrested during price rises because of how the users responded to the markets. The link between this type of market participation and homicide is discussed in “Linking Drugs and Homicide Trends” (page 92).

The prices in figure 5–12 provide weak evidence for the structural and user hypotheses. The price data suggest that the market stability hypothesis cannot be refuted and that prices may influence drug use—and homicide—in unanticipated ways. These results suggest that more carefully constructed studies of price relationship to market stability and drug use and the corresponding impact on individual (as opposed to aggregate) behavior are needed and warranted.

Participant stability. Drug users’ participation in markets has changed in several important ways over the past decade. Earlier sections on victimization and drug use (pages 74 to 87) indicate that both victimization and homicide rates differ substantially by age cohort. Cocaine prevalence among 18- to 24-year-old arrestees has dropped sharply in Washington, D.C., and Detroit. In Washington, D.C., the victimization rate also dropped sharply for the same age category; in Detroit, the victimization rate stopped climbing and leveled off. These patterns suggest, and are further backed by research by Golub and Johnson (1997),

that cocaine use, particularly crack, is increasingly concentrated among older males.²⁹ Aging cohorts of crack users are most likely to be found in cities where the crack problem has been around longest, including New York, Detroit, and Washington, D.C. However, this research concludes that other cities, including Indianapolis, are entering a plateau phase in which cocaine use among younger cohorts is beginning to moderate slowly. The appearance of this cohort effect can, in part, be attributed to generational learning. Younger cohorts initiate into crack (or other drugs) at lower rates after witnessing the impact of the drug on older cohorts. One key implication is that sustained increases in cocaine prevalence among the younger cohorts may predict future problems of the type already discussed.

In the study sites, crack users in particular were perceived as desperate individuals who would use any means, including violence, to procure drugs. According to respondents in most cities, user desperation had gotten appreciably worse over the past decade. Respondents, whether community members, law enforcement officials, or members of the court, perceived very little moderation of this intensity. Analysis suggests that this perception may be accurate, at least in the aggregate.³⁰

The high from crack consumption often lasts as little as 10 minutes. Crack users wishing to remain high for extended periods thus need considerable financial resources. To the extent that users will resort to crime as a means to raise drug money, crack-use patterns appear to place a premium on robbery over burglary. Crack use often occurs late at night in rundown neighborhoods. Both factors tend to limit the opportunities for burglary. Burglary targets are more likely to be occupied late in the evening, which raises the risk of entry. In addition, inner-city homes near crack markets are less likely to have articles of great value. Finally, burglars would then have to find a crack dealer willing to take stolen items in exchange for crack or find a fence to convert the stolen goods into cash with which to purchase the drug. In short, burglary appears antithetical to the crack user’s immediate needs for drugs and cash. In contrast, robbery will often result in a cash take, and both drug dealers and other drug users on their way to make purchases are logical targets. The Baumer et al. analysis suggests

that crack is one of the primary explanations for a sharp divergence between robbery and burglary rates that began in the late 1980s. Although this work and others find a weaker relationship between crack and homicide, robbery and homicide are linked conceptually in the context of crack use. A portion of homicides may simply be robberies that went bad or to which the perpetrator did not want to leave witnesses. Thus, the relationship between crack and homicide may be weaker and more indirect than the relationship between crack and robbery.³¹

It is more difficult to gauge the stability of drug sellers' participation. Blumstein (1995) hypothesizes that juvenile involvement in drug marketing, particularly crack, combined with easy access to firearms, could explain changes in juvenile violence.³² Beyond the strong impression held by most respondents that juveniles are disproportionately involved in narcotics retailing and that this trend is worsening, it is difficult to assess changes in the stability of dealer participation.

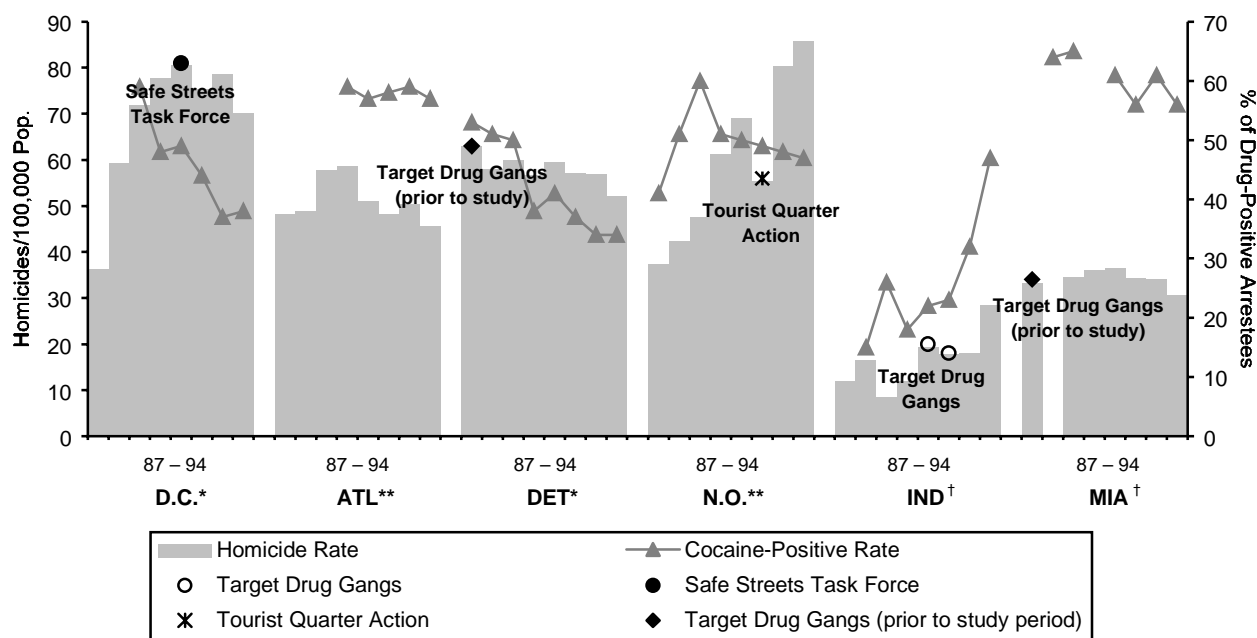
Intervention and stability. In several instances, substantial community interventions against drug markets, primarily crack markets, occurred at or near points when there were substantial increases in homicide rates. In other cases, community responses were associated with substantial decreases in homicide rates. According to interviews, interventions intended to disrupt and dismantle local drug-dealing monopolies and oligopolies largely succeeded in Indianapolis, Detroit, and Miami (the latter two prior to the study period). In addition, New Orleans undertook a major effort to control tourist center crime, much of which was thought to be linked to drugs and drug markets. These interventions, except possibly in the case of New Orleans, occurred at times when the drug markets were relatively tightly controlled by dominant groups. Moreover, the interventions succeeded in breaking their grasp over local retail drug sales. Figure 5–13 shows such interventions superimposed over the community's homicide rate. It is tempting to draw the conclusion that police intervention in tightly controlled drug markets resulted in more loosely structured markets and more competition, which in turn resulted in more violence.

An alternative explanation of events is that police intervention occurred at a point of crisis in the community. That is, drug use was growing, police records and intelligence were beginning to point consistently to several main drug-dealing sources, and community members began to demand a response. The response may have hastened the dissolution of the monopoly or oligopoly that controlled drug dealing in the community, but that structure was likely to have been undermined by the growth in demand anyway. Moreover, interventions such as the establishment of Washington, D.C.'s, Safe Streets Task Force were associated with sharp declines in homicide rates. In short, it is difficult to assess the impact of law enforcement interventions against drug markets and drug dealers on homicide. It is critical, however, to improve the understanding of how price changes affect user and dealer participation stability. Many law enforcement interventions are intended to affect prices or induce local or global scarcities. The extent to which these interventions meet these goals may therefore directly or indirectly affect homicide and violence through the mechanisms identified in "Prices and transaction stability" (page 89) .

Linking Drugs and Homicide Trends

The comparison of arrestee cocaine use trends and homicide rates suggests strongly that cocaine, especially crack cocaine, use was more closely associated with homicide than use of other drugs. Moreover, the relationship between arrestee cocaine-positive rates and homicide trends suggests that the size of the cocaine market or the participation of an at-risk crime-involved population were as important factors in violence as the market structure issues discussed in previous sections. The relationship between victimization rates and cocaine-positive percentages lends further weight to this argument. Participant stability, the component of market stability most closely linked to homicide, is fundamentally a function of drug use. On balance, the links between drugs and homicide appear to fall mainly on the use side. These findings are partially consistent with perceptions the respondents reported: Cocaine (crack) was the drug most closely linked to homicide trends. However, the perception that drug-related violence is primarily a function of market structure and dealer behavior is

Figure 5–13. Homicide, Male Arrestee Cocaine Test-Positive Percentages, and Local Law Enforcement Interventions



Homicide and DUF data drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data is missing for some years and cities. In Miami, UCR homicide data are missing for one year.

more difficult to support and ignores the role that the fraction of users in a high-risk, crime-linked population of arrestees plays in homicide.

Several questions remain, the most important of which is why drug epidemics other than crack have not witnessed the levels of violence associated with crack markets and use. Marijuana, for example, is far more widely consumed, but it is not associated with the violence of crack markets. The heroin epidemic of the mid-1970s in some large U.S. cities was marked by violence. The problem remained confined to a relatively small subset of cities, and the complexities of heroin use and dealing relative to violence were not studied extensively.³³ There are numerous plausible explanations for the high levels of violence associated with crack, not all of which are specific to crack itself. The large population cohort at peak drug-using age during the 1980s could be responsible for much of the violence, with crack simply being the medium of expression. Given the size of the cohort; its economic, educational, and demographic characteristics; and an environment that provided easy access to guns, any

drug with a market and profit structure and pharmacological pattern similar to that of crack would have been associated with violence. An alternative explanation is that there is something specific to crack, such as its stimulant properties, its profit structure, or the way it is marketed, that relates to violence.

Two features of crack markets and crack are particularly salient to this discussion. The first is the basic structure of retail crack transactions; the second is the nature, duration, and consequences of the crack high. It seems clear that crack users participate in drug markets differently from other drug users and that this participation sets the stage for violent confrontations.

Table 5–7 summarizes results from a 1995–1996 study of heroin, powder cocaine, and crack cocaine markets in six U.S. cities.³⁴ Intensive interviews with individuals who self-reported crack, powder cocaine, or heroin use in the 30 days prior to arrest confirmed that crack markets differed from powder and heroin markets across several important dimensions. The data were collected over four calendar quarters, and

Table 5–7. Market and Use Risk Factors for Heroin, Powder Cocaine, and Crack

Factors	Procurement Study Sites ^a			Methamphetamine Study Sites ^b	Washington, D.C.		
	Powder Cocaine	Crack Cocaine	Heroin	Methamphetamine	Powder Cocaine	Crack Cocaine	Heroin
Respondents (#)	350	821	471	252	15	148	63
Used a main source (%)	46	41	51	58	47	35	40
Usually bought outdoors (%)	53	69	73	18	57	82	89
Dealers known (#)	12	22	13	n/a ^c	8	23	19
Number of drug buys in 7 days prior to arrest (mean)	5.4	9.2	9.4	2.8 ^d	2.7	6.3	7.4
Carried gun during last purchase (%)	13.7	5.3	6.7	8.7 ^d	28.6	3.4	0
Among daily users, times used per day (mean)	7.2	5.4	3.7	4.6	3.5	4.4	2.8
Reporting 30 or more consecutive days of use in last 90 days (%)	11	15	46	n/a ^c	13	9	49

^a Chicago, New York (Manhattan), Portland, San Antonio, San Diego, and Washington, D.C. Totals are unweighted and provided for illustration only. Significant local variation exists, but in most cases, the general or average relationship described in the table held up in each of the individual study sites. Readers should refer to the full report (cited in endnote 37) for individual city data.

^b Based on preliminary and partial results from a study fielded in Phoenix, Portland, Los Angeles, San Diego, and San Jose.

^c N/A question not asked in interview.

^d The question used in the methamphetamine interview differed slightly from the question used for the crack, powder cocaine, and heroin interviews.

more than 2,000 individuals responded. Table 5–7 shows results for all six cities and separate results for Washington, D.C., the only homicide study city that was also part of the special drug study. In addition, Table 5–7 provides partial and preliminary results from a similar study of methamphetamine markets. None of the cities that participated in the methamphetamine study were part of the homicide study.

In some respects, heroin users appeared to be more active in drug markets than crack users. For example, heroin users showed longer stretches of consecutive use and had the most purchases in the week preceding arrest. However, in other respects, market participa-

tion of crack users had greater risks. For example, crack users reported, on average, more than 50 percent more daily uses than heroin users reported. The average crack user in these six cities reported using the drug six times a day. Crack users also reported having substantially larger networks from whom they could buy the drug.

Crack users were also the least likely to report having a main source, or a primary supplier, from which the drug was usually purchased. This indicates that a large fraction of crack transactions occur in circumstances where opportunity and environment, not a stable relationship to the dealer, may be important

factors in determining the outcome of the transaction. Marijuana users, on the other hand, are far more likely to purchase their drug from a known source over longer periods of time.³⁵ Table 5–7 shows that methamphetamine users were also likely to have a main source. Thus, there may be a stability in both marijuana and methamphetamine buyer-seller relationships that is not present in crack markets. Such stability does not exist for heroin transactions, yet heroin markets are not considered as violent as crack markets. The matter may simply be one of scale: There are so few heroin buyers (at least relative to crack) that the perceived opportunity cost of not participating in heroin sales may be low.

Both crack cocaine and heroin users were more likely than powder cocaine users to report making a purchase outdoors where the threat of law enforcement intervention may be higher. Methamphetamine buyers were likely to report buying indoors. Powder cocaine users were the likeliest to report carrying a gun during a recent purchase, possibly because: (1) powder transactions involve larger quantities that result in the perceived need for weapons, and (2) crack and heroin users underreport their weapons because they could be used as an aggravating factor in a process where sentences are already harsh.

While an *individual's* risk of encountering violence may depend more on the nature and circumstances of individual transactions than on the drug being purchased, the *cumulative* or *societal* risk appears to be greatest with crack. Two factors lead to this assessment. First, because many more people use crack than use powder cocaine and heroin, even if the individual risk of violence were lower in crack transactions, the cumulative risk would be higher. However, cumulative risk cannot fully explain the relationship between homicide and cocaine. At the national level, drugs such as marijuana are far more widely consumed than cocaine, and at the community level, certain drugs such as methamphetamine are more widely consumed than cocaine.

The second factor is use patterns. The number of daily uses reported in table 5–7 is higher for crack than for heroin.³⁶ The high from crack, particularly for a long-time user, may only last 10 minutes. Thus, the buyer and seller may be in close proximity to each other, or

the buyer may still be in the retailing area when the high wears off. Users coming off a crack high often have an intense need for more crack and feel unhappy and extremely agitated. Crack is often consumed in binges during which a heavy user may go through hundreds of dollars of the drug over several days. Chronic users may have both a pharmacological explanation for exercising bad and risky judgment and a pharmacological compulsion to seek more of the drug. Therefore, they have an economic motivation to commit a crime in order to obtain the drug.

In contrast, marijuana and heroin users, although perhaps as likely to consume their drug immediately, are more likely to have a longer lasting high from their drug and thus be further removed from the retail environment when the desire or need for additional purchases arises. The structure of crack markets may place crack users where they are more likely to be active in the drug market for sustained periods of time in an agitated state, impoverished, and prone to exercising poor judgment. In short, the structural context of crack purchases is high risk. The high number of average daily uses for crack in table 5–7 provides some indication of crack's transitory high and reinforces the notion that crack users make frequent forays into drug markets while impaired. Even though heroin users made more purchases in the week before arrest, crack users are as or more likely to obtain drugs through selling crack, exchanging crack for sex, trading crack for something else, and obtaining crack for free.³⁷

Patterns of crack violence have implications for other drugs, including heroin and methamphetamine. Heroin prices have been declining and retail purities rising for some time in the United States. Policy-makers are concerned that current price-purity patterns will pave the way for dramatic increases in heroin use. One particular concern is that because the higher purity heroin can be smoked, it may attract users who would not inject heroin. The physically addictive properties of heroin have long been associated with property crimes rooted in economic and compulsive needs, but heroin is less commonly associated with structural violence than crack. How this market might transform as heroin consumption approaches the scale of crack use is not clear. There

are reports that cocaine dealers are bundling crack (or powder cocaine) with heroin as a mechanism to increase the scope of the heroin market.

Methamphetamine also appears on the brink of moving into widespread use. It reportedly offers a longer lasting high than crack at a similar price, a finding supported by data from table 5–7 that show that the average methamphetamine user uses fewer times daily than the average crack or powder cocaine user. Moreover, methamphetamine markets do not have the stigma that crack markets and chronic crack use do. Finally, methamphetamine apparently is now being manufactured in large quantities by professional trafficking organizations in the United States and Mexico. Until recently, methamphetamine was produced in small batches by specialized “cooks” producing for target audiences.

The consequences of widespread methamphetamine use for violence and homicide are unclear. Anecdotal information links methamphetamine to acts of violence, but careful studies of the relationship between methamphetamine and violence are only now under way. If purchase frequency, buyer-seller proximity, and duration of pharmacological effects are factors related to violence, then the consequences of widespread methamphetamine use may be substantially different from those of crack. Table 5–7 shows that a greater fraction of methamphetamine users rely on a main source for their purchases, mostly from closed and kinship-based markets.³⁸ Methamphetamine may manifest itself in more directed violence as opposed to the generalized violence associated with crack. In addition, because of the duration and character of methamphetamine’s pharmacological effects, methamphetamine users, while intoxicated, may find themselves in situations that differ substantially from those of crack users. Methamphetamine users may return to their place of work or family as the high wears off. Thus, methamphetamine may become linked with situation-specific violence that is more closely linked with closed networks of family and friends. As methamphetamine production and distribution patterns evolve, it will be important to monitor these trends.

To some extent, the changes in heroin and methamphetamine markets suggest that established dealers,

acculturated to the violence of crack and cocaine markets, may simply be transitioning to a new retail product. To the extent that these new markets offer greater potential profits than existing crack markets, that heroin markets grow in size to prevalence levels at least comparable to crack, and that crack dealers transfer their methodologies, skills, and infrastructure to heroin and methamphetamine markets, the future may be marked by patterns of violence similar to those accompanying the establishment of crack markets.

Finally, increases in marijuana use have raised concerns, particularly in light of recent developments in Washington, D.C.’s, and Richmond’s marijuana markets. Officials in these two cities report that marijuana markets have taken a violent turn in recent months. Authorities suggest that some of the increase in violence can be traced to changes in the buyer-seller relationship. It appears that some segments of the marijuana market are becoming less closed and more street oriented and that some crack dealers may be making the transition to marijuana dealing. The importance of long-term, steady buying practices for marijuana is apparently diminishing in some markets and being replaced with commodity-like competition that is typical of crack markets. Whether this trend in Washington, D.C., and Richmond represents a fundamental reconfiguration of marijuana markets or is merely a temporary symptom caused by the movement of some crack dealers to retail marijuana markets remains to be seen. What is clear, however, is that the large increase in juvenile marijuana use creates at least the potential for a substantial shift in the structure of marijuana markets.

Policy Implications

Authorities need to develop a better understanding of the demand for, and changes in the demand for, drugs at the local level. Also, municipalities need reliable drug prevalence data and better dissemination and analysis of existing data. The clear relationship between homicide and drug use, particularly cocaine, in the study communities speaks to the need for timely drug data that reflect dynamic local conditions. Given the low prevalence of drug use among the general population, it seems logical to focus on the

higher risk population of arrestees. Drug use and drug market interventions have important implications for violence that can only be addressed with a deeper understanding of the interrelationships. Police departments are generally capable of providing information on interventions, but their ability to describe the dimensions of the drug problem or examine cause-and-effect relations is limited. DUF provides some of the information necessary, although its impact is limited to 23 sites. Beginning in fiscal year 1997, DUF (now known as the Arrestee Drug Abuse Monitoring program or ADAM) will be reconfigured to provide local policymakers with more timely and relevant drug data and will be expanded to 75 or more sites. Such changes promise to greatly expand the ability to examine the local structure of national trends and problems.

In addition, policymakers should place more emphasis on collecting data on drug market dynamics, including prices, participation patterns, and the effects of law enforcement interventions. Careful studies that investigate the complex interplay between market structure and drug use are particularly justified. These data should be locally specific to capture links and relationships that would not be apparent in aggregate analyses. For example, the goal of many law enforcement interventions is to increase scarcities, which is a variation of price increases. Thus, it becomes critical to understand at the local level the impact of price changes on transaction and participant stability. Limited evidence suggests that changes in transaction stability may be as important as changes in use.

These findings also have critical implications for the allocation of drug control dollars at the local level. That is, if both drug market dynamics and drug use are implicated in violence and homicide, then both components merit policy interventions. Drug market issues may be most suitably addressed through law enforcement. Drug use, however, is most likely to be affected by treatment, prevention, and other programs that change the demand for drugs. Moreover, these findings strongly suggest that, because of the high drug prevalence rates among arrestees and the links between substance abuse and violence, arrest is a key point of intervention. Models and demonstration programs such as *Breaking the Cycle*, which offers

universal substance abuse screening at arrest and the development of tailored programs of treatment, sanctions, and supervision, should be carefully evaluated and studied.

Guns

Gun Hypothesis

The gun portion of the study addressed the hypothesis that the availability and lethality of guns, particularly handguns, was a direct, contributing factor to homicide in the community. Measuring any of these dimensions relating to guns is extremely difficult. It was expected that gun availability would increase homicides by several causal mechanisms, including escalating the potential for violence in conflict situations and increasing the probability of death when gun injury is inflicted. However, it is also possible that a greater prevalence of guns could lead to reduced levels of homicide. Widespread availability of guns, for example, might serve as a deterrent to some crimes.³⁹ Nevertheless, the primary expectation was that as gun availability increased, so would homicide rates.

Perceptions of Guns

In the aggregate, respondents rated guns equal to drugs as a contributor to homicide and violence; guns averaged 7.6 on a 10-point scale, compared to 7.6 for drugs and 5.3 for gangs. Communities' perceptions of guns were well founded. During at least one year between 1992 and 1994, guns were responsible for more than 80 percent of all homicides in five of the eight study sites.⁴⁰ The fraction of deaths resulting from guns has generally increased since 1985, regardless of the underlying trend in homicide rates. Unlike the cocaine-positive percentages, which correlated with both increases and decreases in homicides in study cities, the gun-death correlations tended to be highest in cities that experienced large increases in homicide rates for at least some portion of the 1985–1994 period. Gun murders were a greater fraction of overall homicides in the 1990s than they were in the mid-1980s, including those in cities where the homicide rate has leveled off or declined. Thus, the corre-

City	Correlation	P-Value	N
Washington, D.C.	0.9633	0.000	8
Miami	0.9086	0.091	4
New Orleans	0.7528	0.051	7
Richmond	0.5596	0.191	7
Indianapolis	0.5460	0.161	8
Tampa	-0.2467	0.753	4
Atlanta	-0.6225	0.099	8
Detroit	-0.6512	0.080	8

lation results in table 5–8 and regression results in table 5–9 show both positive and negative relationships between total homicides and gun homicides.

Respondents perceived important changes in the types of guns used, the deployment of guns, and the types of gun users in their communities. Specifically, respondents observed:

- ◆ **Increased lethality of weaponry.** Movement away from revolvers and toward semiautomatic and higher caliber (9mm) weapons.

- ◆ **Increased willingness to use guns.** Increased frequency with which low-stakes confrontations escalate to gun use.
- ◆ **Changes in user population.** Increased gun use by juveniles.

Difficulties in measuring prevalence notwithstanding, the respondents had strong impressions that guns were far more readily available than they were years before. They reported that everyone was armed, whether the State allowed carrying concealed weapons (Florida and Virginia) or not (Washington, D.C.). Although respondents agreed that their communities were flooded with guns, there was less unanimity as to the source of the gun problem. At least two cities, Richmond and Miami, were considered source cities for guns. Retail outlets in Miami and Richmond attracted not only local buyers but buyers from other jurisdictions. Factors that attracted out-of-area buyers included the retail availability of weapons and the relatively simple permitting and purchase regulations. Authorities generally believed that the other cities (Detroit, Indianapolis, New Orleans, Tampa, and Washington, D.C.) did not serve as gun sources to the same extent as Richmond and Miami.

Although measures for the prevalence of gun ownership and methods of purchase were not available, respondents from the sites reported a variety of concerns about gun-buying practices. In recent

City	Model	R-Square	F-Statistic	Significance	Degrees of Freedom
Washington, D.C.	linear	0.928	77.22	0.000	6
Miami	linear	0.826	9.47	0.091	2
New Orleans	linear	0.567	6.54	0.051	5
Detroit	linear	0.424	4.42	0.080	6
Atlanta	linear	0.387	3.8	0.099	6
Indianapolis	linear	0.298	2.55	0.161	6
Richmond	linear	0.313	2.28	0.191	5
Tampa	Insufficient observations.				

months, many respondents reported an increase in “straw” purchases that they attributed to the impact of the Brady bill. (A straw purchase is when a qualified buyer purchases a weapon and sells it to a secondary buyer who would not have otherwise qualified.) Richmond respondents reported that straw purchases were quite popular because Virginia had additional restrictions that limited the number of guns a person may purchase monthly. Street markets were cited as a particular problem in most communities. Few jurisdictions reported large problems with other, more specialized gun acquisition problems such as theft. In general, most respondents, particularly in the Southern States, felt that obtaining weapons both legally and illegally was simple to do. These perceptions can, to some extent, be validated by external data sources.

Supplemental data indicated that access to guns varied substantially from site to site. Beginning in 1995, DUF began asking arrestees about guns with a special questionnaire. The DUF gun data, for example, showed that most arrestees reported obtaining their weapons from street sources. About 35 percent of handguns were obtained from the streets, about 23 percent from family or friends, 20 percent from gun stores, and 9 percent from pawnshops. Less than 1 percent reported obtaining handguns from victims or from theft, and less than 2 percent reported obtaining them from a gun show. In Miami, a much larger fraction of arrestees (45 percent) reported purchasing their handguns in a store, and a much lower percentage reported getting them from family members or friends (5.4 percent) than did arrestees in other cities. This may reflect Florida’s laws regarding carrying concealed weapons. Detroit reported the highest percentage of street sales; 4 in 10 Detroit arrestees got their weapons on the streets. New Orleans recorded the highest fraction of sales in pawnshops (11.4 percent) and Washington, D.C., the lowest (1.2 percent). Washington, D.C., reported the highest rate of handgun purchases from “other sources” (17.4 percent). This likely reflected the ban on handgun possession and sales in the District of Columbia—and their availability in surrounding States.

Federal authorities reported the need to focus on gun-trafficking organizations, whereas local responses tended to focus on more general issues of access to

weapons, the specific conditions under which firearms were allowed to be carried, and the situation in which they were employed. As with drugs, Federal authorities tend to see a broader, more national picture while local authorities tend to see the narrower context of guns and gun use.

Gun Control Strategies

Gun regulation is primarily a function of State and local resources, laws, and practices. In communities that have attempted to implement comprehensive gun control approaches, the results have been mixed. Washington, D.C., for example, banned acquisition of handguns in 1976, although individuals who owned weapons prior to the implementation date were allowed to retain their weapons. Some analysts found the policy had a rapid, stark impact on reducing gun violence, including homicide and suicide.⁴¹ Other analysts, however, have concluded that the changes in homicide trends that surrounded the law’s implementation could not be ascribed to the handgun ban but must be explained by other confounding factors.⁴² Homicide rates in Washington, D.C., though declining, remain very high. Most homicides are committed with handguns, despite the ban. In the intervening years, police resources and other factors have limited the community’s ability to rigidly enforce the ban. Liberal purchase laws in Virginia in particular have provided Washington, D.C., residents with easy access to gun markets. This community’s attempt to control gun violence through communitywide intervention has had uncertain effects.

The Kansas City, Missouri,⁴³ Police Department (KCPD) conducted a different intervention against guns.⁴⁴ For a period of 29 weeks, KCPD increased patrols and stepped up enforcement of gun violations in a high-crime neighborhood. Violent crime activity dropped in the target neighborhood relative to surrounding neighborhoods where displacement effects could have been expected and to a control neighborhood that was remote from the target and that did not benefit from increased policing services. Although the initial evaluation of the Kansas City program shows it to be promising, its long-term impact is not clear, the ability to replicate the program on a larger scale has not been established, and the program’s operating costs may be a barrier for other communities.

Beyond bans on possession and purchase of firearms, community-level approaches to gun control in the eight study sites were rare. Aggressive gun prosecution programs, for example, were available in many jurisdictions, but communities often lacked the ability to pursue charges in each instance. Authorities tried to make use of tougher sentences for gun felons, but the prospects for being able to do so depended on a wide variety of factors that may not have been controllable.

Given the enormous complexity of measuring gun prevalence, it is not surprising that communities have difficulty in measuring the success and impact of gun control strategies at the city level. Nevertheless, municipalities generally reported two areas that have been particularly useful or that have met with temporary success. In terms of utility, most jurisdictions reported that cooperation with Federal authorities was an essential component of gun control activity in their community. In terms of success, authorities reported that numerous programs operating in confined or contained environments have decreased gun violence. These factors are discussed in subsequent sections.

Cooperation with Federal authorities. Local authorities reported that Federal gun programs had a prominent role in the local gun control strategy. Moreover, local officials described Federal efforts as successful in at least moderating the levels of gun violence. Although officials perceived that Federal antigun efforts mitigated gun violence in their communities, these Federal efforts have not been evaluated. Specific aspects of Federal gun intervention that were frequently praised included:

- ◆ The range and breadth of Federal programs, including sentencing enhancements for gun offenses, programs targeting repeat violent offenders, mandatory minimums, and a “no plea bargaining” stance for certain gun offenses.
- ◆ The Federal Government’s ability to provide gun control resources, particularly compared to State and local resources and enforcement priorities.
- ◆ The ability to undertake long-term and strategic projects, such as gun-trafficking investigations, where local organizations cannot.

At the same time, local authorities perceived limits to the Federal role. Perhaps the primary limit was that

the Federal effort was still small relative to the magnitude of the gun problem. Also, Federal prosecution criteria often resulted in Federal authorities taking the most promising cases. Thus, rather than serving as a model for State and local officials, Federal gun prosecutions, in conjunction with limited local resources and differing local enforcement priorities, may have reduced local ability to prosecute gun violence.

Appreciation for the Federal role against gun violence appeared to be rooted in the lack of integrated, comprehensive, community-level responses to gun violence. Many community members and officials noted that they lacked the means to deal with the totality of the gun problem. One respondent noted that extensive networks have evolved around drugs—including State-level coordinators; Federal-level coordinators; treatment, prevention, interdiction, and law enforcement programs; block grants; drug courts; and regularized reporting mechanisms—but that such networks did not exist regarding gun violence. The respondent was not optimistic about the prospects of such networks developing around guns because of their generally legal status and the lack of moral consensus surrounding the issue.

Contained environments. Among the eight study sites, only Washington, D.C., had a regional- or community-level gun control strategy. All of the cities, however, operated gun programs that affected various populations and components of the community. Two areas where communities appeared particularly active against guns were public housing and schools. These environments, which typically have controlled access, limited entry points, and smaller populations that can be saturated with intensive services more easily, might be termed “contained environments.” Community representatives could point to numerous examples of gun control programs that have been successful in contained environments. Many school districts, for example, have implemented weapons check programs that have helped reduce the number of violent incidents on school properties. Although not directly linked to homicide (since few school districts have homicide problems), the programs were nevertheless credited with reducing violence on campuses. In response to several violent incidents on school campuses, Miami public

schools deployed teams with handheld metal detectors to secondary schools. Once onsite, the teams randomly selected classrooms and searched all students with the metal detectors. Incidents of weapons being detected declined from more than 300 in the early 1990s to under 100 for 1995.

A similar approach has evolved in some public housing programs. Changes in Federal housing regulations have significantly assisted in this process. Public housing tenants, for example, could lose their tenancy rights if residents were found in possession of drugs. Similar changes in regulations allowed housing administrators to combat gang membership and gun use in public housing.

Housing authorities have also devised their own strategies for addressing gun use on housing authority grounds. Miami housing authorities have cleaned up Metro-Dade housing units by aggressively enforcing new housing regulations. They candidly admitted that the environment immediately around many public housing units remained dangerous. Indeed, authorities believed that their activities in public housing areas displaced criminal behavior into the neighborhoods that surround housing units.

Gun Prevalence

Prevalence data on guns were immensely difficult to gather. Previous studies have used indirect measures such as gun sales and registrations within a jurisdiction, memberships in gun organizations, and subscriptions to gun and hunting magazines. While such indicators may provide a reasonable lower bound to the minimum number of guns possessed in an area, they could only offer crude approximations as to overall ownership. The difficulty with such measures is that they generally reflect legal ownership (sales and registration data), offer crude proxies of unregistered ownership by law-abiding citizens (gun clubs and magazines), and overrepresent longgun ownership relative to handguns (hunting magazines). Such gun owners account for some murders, but this population is not likely to include a representative portion of gun owners who use their weapons illegally. Beginning in 1995, DUF began asking arrestees about guns with a special questionnaire. The DUF data could not provide a historical overview of gun

ownership and gun use for the period under study, but they did provide some insights into the current state of matters in six of the eight study sites.⁴⁵ These data provided information on gun use in a population suspected to be criminally active. Using the DUF gun data, Decker, Pennell, and Caldwell⁴⁶ found that: (1) a substantial fraction of arrestees reported carrying guns most of the time; (2) those testing positive for drugs, including cocaine, were no more likely to report owning or using a gun than those testing negative; (3) a plurality of arrestees get their weapons from illegal markets; and (4) gang membership and drug sales increase the likelihood of possessing a weapon. More than 38 percent of the arrestees involved in drug sales in the six-city sample reported using a gun in the commission of a crime, compared to about 19 percent of all arrestees and less than 11 percent of nondrug-dealing arrestees. Forty-six percent of current gang members reported using a gun to commit a crime, compared to 19 percent overall and 18 percent among nongang members.

Unfortunately, data on gun ownership were not available across time, so it was not possible to examine how changes in gun ownership rates related to changes in homicide rates. Table 5–10 shows that gun ownership rates among arrestees and homicide rates appear to be uncorrelated across cities, at least for 1995. Atlanta and Detroit had similar homicide rates but dissimilar ownership rates among arrestees; Indianapolis and Miami had similar homicide and gun ownership rates; and New Orleans and Detroit had similar gun ownership rates but starkly different homicide rates. If there is a pattern across sites, it is difficult to extract.

Guns and Drug Selling

Interview respondents assumed a significant interaction between illegal gun use and drug market activity. In the DUF gun study, 38 percent of 682 reported drug dealers indicated that they had used a gun to commit a crime. The results were roughly the same across individual cities. Washington, D.C., drug dealers reported the lowest incidence of having used a gun to commit a crime (33 percent), and Miami drug dealers reported the highest incidence (43 percent). The incidence data for 1995 did not correlate with the

Table 5–10. Homicide Rates and Arrestees’ Self-Reports of Firearm Ownership, 1995

City	Homicide Rate per 100,000 Population	Owned Gun 30 Days Before Arrest (%)
Atlanta	44.8	40.3
Detroit	46.5	28.2
Indianapolis	26.5	40.6
Miami	29.0	41.3
New Orleans	73.6	33.1
Washington, DC	61.8	19.6
National	28.9 ^a	35.0 ^b

^a DUF cities only, excluding Ft. Lauderdale and including all of New York City.

^b Gun study sites only.

1995 homicide rates: Reports of drug dealers using weapons to commit crimes did not appear with greater frequency in communities that had higher homicide rates. It would be useful to have multiple years of gun incidence data to look at patterns over time, but those figures are not available.

There were insufficient observations on homicides in the dataset to report if drug dealers from high homicide rate cities were more likely to have killed someone during the commission of a crime than drug dealers from low homicide rate cities. Overall in the six DUF sites under consideration, drug dealers were five times as likely (1 percent compared to 0.2 percent) to have used a gun to kill during the commission of a crime. Seventy percent of the people who reported using crack and selling drugs also reported carrying a firearm, compared to 62 percent who used marijuana and sold drugs, 67 percent who used heroin and sold drugs, and 64 percent who used powder cocaine and sold drugs. The interview instrument did not ask the respondents to specify which type of drug they sold, and so the figures should not be interpreted to mean that 70 percent of crack dealers carry weapons. Dealers who used the drug they sold represented an unknown fraction of the overall set of drug dealers. Confessed drug dealers were far more likely to have used a gun to scare a victim during the crime for which they were arrested (10.2 percent compared to

1.3 percent), to injure someone (2.4 percent compared to 0.3 percent), or for protection (5.4 percent compared to 0.5 percent) than the general DUF sample. The higher rates of carrying weapons among drug sellers, as opposed to drug users, have been documented elsewhere.⁴⁷

The results from the DUF gun addendum provided limited support for the drug hypotheses outlined in earlier sections. The gun study showed that drug dealers were likely to be armed, which in turn raised the potential for dealer-to-dealer, competitive market, and other forms of structural violence. However, the findings also have implications for user-related violence since desperate or impaired drug users engaging in transactions with armed dealers would likely face significant risks of violence. In other words, the presence of firearms in drug markets is likely to affect both the stability and use components of the drugs-homicide relationship.

Policy Implications

Communities perceived a large problem with respect to guns and firearms and their impact on homicide. However, communities’ responses to gun-related violence issues were less focused and more reliant on Federal direction than their responses to illicit drugs. In the absence of community-developed comprehensive tools to address gun violence, the Federal role in developing an agenda for comprehensive community-level responses to gun violence was enhanced by default.

A second issue was that communities needed to explore the role of contained environments with respect to gun violence, including what were the necessary and sufficient conditions for contained environments to work and what were the implications for Crime Prevention Through Environmental Design (CPTED) and similar prevention methods.

Finally, there was the specific aspect of armed drug dealers and, to a lesser extent, armed drug customers. The results from recent studies suggest that these issues bear closer examination, particularly for their contributions to overall levels of gun violence in communities. It remains unclear what fraction of gun violence can be attributed to drugs and drug markets.

Gaining a better understanding of the distribution of gun violence will be important to designing appropriate interventions.

Gangs

Gang Hypothesis

Increases in gang activity were expected to correlate with increases in homicides. Gang activity, like drug activity, cannot be measured directly. The estimated number of gangs and gang members, prosecutions for gang-related crimes, and other such factors were expected to function as reasonable proxies for gang activity. Counts of gang-related homicides could not be reported, however, in part because homicide units did not retain information on such homicides as far back as 1985 and in part because many communities have had extremely few gang-related homicides.⁴⁸

Before proceeding to the findings from the gang portions of the interviews, it is worth noting again a limit to the sample that was selected. The researchers did not select cities with the strongest trends relative to the hypotheses. For example, they did not deliberately seek cities with high levels of gang activity and gang homicides. Rather, they deliberately sought sites that demonstrated the strongest overall *patterns* or *trends* in homicide in the belief that the underlying hypotheses would be more observable in communities where homicide trends were strongest. This selection method may have worked against certain cities where significant trends offset each other to produce little change in homicide rates. Cities with increasing gang homicides and declining drug homicides might show little overall change in homicide patterns if the forces were of approximately equal strength. The researchers were not aware of cities that fit this pattern, nor were they aware of systematic ways in which the hypotheses would have offset each other and thereby biased the city selection. Nevertheless, none of the cities selected for this study were classic “gang” cities.

Perceptions of Gangs

Gangs scored significantly lower than drugs and guns as a contributing factor to violence and homicide. Gangs scored an average 5.4 on the severity scale,

compared to more than 7 for guns and drugs. Two factors explain the lower severity scores given to gangs. First, respondents to a great degree found gangs inseparable from drugs. When respondents considered the drugs/gangs interaction, they typically rated gangs higher on the severity scale. When they considered gangs independently of drug trafficking and related effects, they scored gangs much lower in severity. A second reason gangs were given less weight in the communities’ problems with violence and homicide is that most respondents compared their gangs to the classic structures and organizations found in Los Angeles and Chicago. Many respondents expressly stated, “We don’t have a problem like Los Angeles [or Chicago].” One implication is that departures from this classic structure may not be recognized as threats at the community level, even if the hybrid (or nonclassic) organizations are involved in violent crimes.

Most respondents suggested that gang activity posed only a mild threat or problem in their community. They characterized their gangs as primarily home-grown and not influenced by outsiders from such traditional gang centers as Los Angeles. They also characterized their gangs as comprised of “wannabes,” people who emulate certain gang behavior or identify with gang insignia but who are not necessarily committed to gang activities. Researchers in gang activity have noted that communities have some incentives to deny or understate the presence of gangs.⁴⁹ Some believe that acknowledging gang activity is detrimental to tourism, adversely affects property values, and gives advantageous publicity that might attract wannabes, among other factors.

Overall, local authorities reported that a wide range of antigang activities had been undertaken, with many programs based in law enforcement organizations, schools, and public housing areas. Programs ranged from sports leagues to violence mitigation programs, and many bore only indirectly on gang activity. Some public housing authorities reported using Federal guidelines regarding gang activity to disrupt and dislocate gangs and gang members from public housing. One jurisdiction reported mobilizing law enforcement officials prior to big local events such as concerts, expressly for the purpose of deescalating

potential gang conflicts. Respondents were inclined to rate these programs as partially effective since they could not point to significant gang problems in their communities. According to respondents, however, these programs have not been formally evaluated.

Many of the States in which the eight cities are located have enacted, or have pending, gang definitions that would aid in prosecution, law enforcement, and other public safety activities. These definitions spanned a wide range but tended to rely on criteria such as tattoos, clothing, and associations or relations. Many cities used similar definitions and tactics as well as others such as graffiti analysis to monitor gangs. In contrast, Federal authorities had little involvement with gang activities as they are traditionally construed. Federal authorities in some jurisdictions reported being active with local authorities against home-invasion and drug-trafficking gangs, but none reported directly targeting associational, territory-based gangs. Federal practice instead focused on prosecuting the underlying criminal acts.

Gangs and Drugs

Recent work on gang structures⁵⁰ indicated that relatively few gangs conform to the traditional view of gangs as large (more than 100 members), established (a history of 10 to 20 years or more), and territory-based and -motivated. This work reported that very few gangs specialized in drug trafficking. However, other works⁵¹ have indicated that many gangs sell some drugs and significant numbers of gangs are extensively involved in drug dealing. Others have noted that even though a gang may not sanction drug-dealing activities, gang members may engage in drug transactions that contribute to an impression of gang involvement in narcotics. By one older estimate,⁵² approximately 25 percent of gangs can be characterized as social, with low delinquency and low drug involvement; less than 10 percent can be characterized as “party gangs” with low general delinquency but high drug involvement (particularly use); almost 40 percent are “serious delinquent gangs” with widely varying crime patterns, of which drug use and sales are a substantial fraction; and about 25 percent are “gang organizations” that are

tightly organized and involved in drug activities that relate structurally to other gang crime patterns.

Despite the fact that none of the cities in this study appeared to have traditional gangs operating within their borders, gangs operated and contributed to violence within each of the study cities. Police were able to identify numerous gangs in most cities and tie them to violence. Specifying gangs’ roles in violence in these cities was difficult, however. The primary connection between gangs and homicide in the eight study sites appeared to be the drug trade. Most respondents indicated that, after factoring out drug activity, gangs made small contributions to violent crime in their communities. Assessments of gang involvement in drug trafficking varied from community to community, but most respondents felt that gangs were responsible for a sizable portion of the drug dealing in their communities. Respondents, however, were not always able to articulate the differences they perceived between gangs and other drug-selling organizations. In many instances, it appeared that *any* group selling drugs was considered a gang.

Few police officials were able to report the fraction of homicides in their communities that related to gangs. In some cases, the police did not have a category for gang-related homicides. In cases where such a category did exist, the definitional criteria tended to vary substantially, as they did in defining drug-related homicides. Unlike DUF drug prevalence estimates, which are backed by a uniform, objective measure (urine testing), gang prevalence estimates should be regarded with extreme caution because of these definitional differences. What constitutes “gang involved” in one community may not qualify in another. A community’s perception of gang problems is perhaps best measured by the level of antigang activity. The most common forms of antigang activities implemented include intensive surveillance and enforcement, intensive street sweeps, and “hot spot” targeting. Generally, the eight cities reported using some blend of these three strategies to counter gang activities.

Policy Implications

Municipalities are clearly struggling with the definitions of gangs and gang activity. In the absence of a reliable, acceptable, uniform indicator, it is difficult to make meaningful comparisons across sites and quick status checks within a community. In the area of drug control, such indicators are relatively widely available and uniform across sites. In cases that are based on drug testing, the indicators have very high reliability. This study cannot determine whether the development of an analogous indicator for gang activity is warranted. This study does indicate, however, that the definitional problems surrounding gangs and gang activities are substantial and that these problems in turn affect municipalities' abilities to address gang problems, share antigang strategies, and monitor the initiation or development of a problem in the community.

Notes

1. Goldstein, Paul, "The Drug/Violence Nexus: A Tripartite Conceptual Framework," *Journal of Drug Issues*, 15 (1985):493–506; and Goldstein, P., H. Brownstein, P. Ryan, and P. Belluci, "Crack and Homicide in New York City in 1988," *Contemporary Drug Problems* (16) (1991):651–658, discuss this framework.
2. However, the precise nature of this cumulative impact is hotly disputed. See Lott, John R., and David Mustard, "Crime, Deterrence and Right-to-Carry Concealed Handguns," *Journal of Legal Studies* (January 1997):1–68, and Black, Dan A., and Daniel S. Nagin, "Do 'Right-to-Carry' Laws Deter Violent Crime?," forthcoming in the January 1998 *Journal of Legal Studies*, for conflicting views.
3. Hagedorn, John M., "Neighborhoods, Markets and Gang Drug Organization," *Journal of Research in Crime and Delinquency* 31(3) (August 1994):264–294, reports that organized and disorganized drug-dealing groups can coexist in communities in the early, middle, and latter stages of a drug epidemic. He also argues that monopolistic groups have used violence to fend off competition. Mieczkowski, Tom, "Drugs, Crime, and the Failure of American Organized Crime Models," *International Journal of Comparative and Applied Criminal Justice* 14(1)(2) (Spring-Winter 1990):97–106, argues that tightly cohesive organizations cannot survive in chaotic, dynamic drug markets.
4. Appendix 5–A provides a full description of DUF and other data sources used in this report.
5. Current drug-testing methods cannot distinguish crack from powder cocaine. Drug test results reported here are for both powder and crack users. In drug testing, cocaine use is confirmed by the presence of a metabolite in the assay-tested urine, but that metabolite is the same whether the drug is consumed as powder or crack. DUF arrestees provide self-report data on crack, and crack is thought to represent a large fraction of overall cocaine consumption. Self-report data, although not as reliable as independently confirmed bioassays, are nevertheless good approximations of what drug testing can confirm. Crack self-report data were compared to cocaine urinalysis results. Overall, self-report and test trends were similar, and the decision was made to use the data that were based on a reliable, biological marker.
6. UCR homicide data are not available for Miami for all years.
7. Unless otherwise specified, the data in the DUF-based figures are for *adult males* only. Only two study sites collect separate DUF information on juveniles. Five of the six DUF sites that are part of the homicide study collect data on females. Female data are not available for Miami. To use a consistent reporting practice across all cities, only male data are used in most charts and graphs. Homicide and drug use issues pertaining to females are reported in "Drugs and Domestic Violence" (p. 86).
8. Ecological correlations are those in which group, rather than individual, observations are correlated. The grouping strips away variation found at the individual level, and this aggregating process translates into a higher correlation than would be found at the individual level.

9. SAMHSA, "Substance Abuse in States and Metropolitan Areas: Model-Based Estimates from the 1991–1993 National Household Surveys on Drug Abuse, Summary Report," September 1996.

10. Unpublished SAMHSA trend data based on city-level oversampling procedures showed similar prevalence rates for 1991, 1992, and 1993 for Miami and Washington, D.C.

11. The positive test data for the 17-and-under age bracket were based on a small number of observations because they reflected only juveniles who were charged as adults. The 17-and-under data were thus likely to be quite unstable. Data on juveniles that did not fall into the adult sample were collected separately; they were available in only two of the eight study sites and are not reported here.

12. Golub, Andrew Lang, and Bruce D. Johnson, *Crack's Decline: Some Surprises Across U.S. Cities*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1997, NCJ 165707.

13. Age categories cannot be further stratified by race because of small sample sizes. There are too few white arrestees in most cities to stratify by both age and race. Further, test-positive percentages and victimization rates for those under 17 are omitted. Cocaine-positive percentages for that age category are based on a small number of observations because the adult data account for juveniles charged as adults. Among study sites, separate juvenile DUF data are collected only in Washington, D.C., and Indianapolis.

14. The change in scale between the two figures is necessary to accommodate the victimization rate for the 18–24 cohort in New Orleans. Males in that age bracket were murdered at a rate of more than 600 per 100,000 population during the study period.

15. Swersey, Arthur, and Elizabeth Enloe, "Homicide in Harlem," New York City RAND Institute, 1975, reported that changes in intentional killings were the dominant explanation for overall changes in New York City homicides in the late 1960s and early 1970s and that intentional killings related mainly to "disputes involving narcotics activities." This analysis was based on an examination of homicide case

records. Presumably, many of these drug-related disputes involved heroin.

16. Heroin use in Detroit is higher among female arrestees.

17. DUF tests for opiates, a category that includes heroin, black tar heroin, morphine, and certain synthetic opioid compounds. Self-report data indicate that most opiate positives are for heroin.

18. De La Rosa, Mario, Elizabeth Y. Lambert, and Bernard Gropper, eds., *Drugs and Violence: Causes, Correlates and Consequences*, National Institute on Drug Abuse (NIDA) Research Monograph Series, No. 103, Washington, D.C.: U.S. Department of Health and Human Services, National Institute on Drug Abuse, 1990, provides an overview. See in particular Miller, Brenda A., "The Interrelationships Between Alcohol and Drugs and Family Violence," for a discussion of alcohol and violence studies.

19. Cox, B., M. Witt, M. Traccarella, and A. Perez-Michael, "Inconsistent Reporting of Drug Use in 1988," *Survey Measurement of Drug Use: Methodological Studies (NIDA)* (1992):109–153. See also general findings from Johnston, L.D., J.G. Bachman, and P.M. O'Malley, *National Survey Results on Drug Use From Monitoring the Future, 1975–1995*, University of Michigan, Institute for Survey Research, 1996, and Mensch, B.S., and D.B. Kandel, "Underreporting of Substance Use in a National Longitudinal Youth Cohort: Individual and Interviewer Effects," *Public Opinion Quarterly*, 52 (1988):100–124.

20. Harrison, Lana, "The Validity of Self-Reported Drug Use," *Journal of Drug Issues*, 25 (Winter 1995):91–111.

21. Cox, Witt, Traccarella, and Perez-Michael, "Inconsistent Reporting of Drug Use in 1988," 109–153.

22. Data relating to alcohol cover the 72 hours prior to arrest for 1989–1994. For 1987 and 1988, the interview asked about the use of alcohol 24–48 hours before arrest.

23. A new interview instrument was used in 1989. The degree to which the 1989 alcohol self-report data

stand out from other years likely reflects this change of instrument.

24. Reuter, Peter, Robert MacCoun, and Patrick Murphy, "Money From Crime: A Study of the Economics of Drug Dealing in Washington, D.C.," Santa Monica, California: The RAND Corporation, 1990; and MacCoun, Robert, and Peter Reuter, "Are the Wages of Sin \$30 an Hour?: Economic Aspects of Street-Level Drug Dealing," Santa Monica, California: The RAND Corporation, 1992.

25. STRIDE data on cocaine prices were adjusted to reflect the discount received as the quantity purchased increases. For a discussion of the adjustment methodology, see appendix 5-B, "Data Sources."

26. Only transactions that occurred within city boundaries were used in the calculations for Figure 5-12. Transactions from surrounding suburban and other jurisdictions were omitted to ensure that the reference population for the price series matched the reference population for the homicide statistics.

27. Not all of the variability in cocaine prices could be attributed to changes in stability. Some variability in the data was a product of disaggregating price to the city level. The number of observations per year varied by city, but in some cases there were as few as 10 price observations per year. (Years for which fewer than 10 observations were available were not reported.) The small number of observations made the data more vulnerable to the influence of atypical purchase transactions. Moreover, the elimination of transactions taking place outside the city boundaries further limited the number of price observations.

28. Jonathan Caulkins, unpublished paper, estimated the price elasticity of demand using DUF data.

29. Golub, Andrew Lang, and Bruce D. Johnson, *Crack's Decline: Some Surprises Across U.S. Cities*, Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1997, NCJ 165707.

30. Baumer, Eric, Janet Lauritsen, Richard Rosenfeld, and Richard Wright, "The Influence of Crack Use on Crime Rates: A Cross-City, Longitudinal Analysis," supported by NIJ grants 94-IJ-CX-0030 and 93-8050-MO-IJ.

31. See also Baumer, Eric, "Poverty, Crack and Crime: A Cross-City Analysis," *Journal of Research in Crime and Delinquency*, 31 (1994):311-327.

32. Blumstein, Alfred, "Youth Violence, Guns, and the Illicit Drug Industry," *Journal of Criminal Law and Criminology*, 86 (1995):10-36.

33. Available evidence indicates that violence associated with heroin markets was concentrated on the use side. It is not clear, however, how carefully market stability was studied. For an overview, see Moore, Mark H., *Buy and Bust*, Lexington, Massachusetts: Heath, 1977.

34. The six cities were Chicago, New York City (Manhattan), Portland, San Antonio, San Diego, and Washington, D.C.

35. Reuter, Peter, and Mark A.R. Kleiman, "Risks and Prices: An Economic Analysis of Drug Enforcement," in *Crime and Justice: An Annual Review*, vol. 7, ed. Michael Tonry and Norval Morris, Chicago, Illinois: University of Chicago Press, 1986.

36. Powder users reported an even higher average but are more likely to buy from a steady source under less threatening circumstances.

37. Riley, K. Jack, *Crack, Powder Cocaine, and Heroin: Drug Purchase and Use Patterns in Six U.S. Cities*, Research Report, Washington, D.C.: U.S. Department of Justice, National Institute of Justice and Office of National Drug Control Policy, NCJ 167265, December 1997.

38. Preliminary results from the DUF methamphetamine study, personal communication with principal investigator.

39. Kleck, Gary, and E. Britt Patterson, "The Impact of Gun Control and Gun Ownership Levels on Violence Rates," *Journal of Quantitative Criminology* 9(3) (1993):247-287.

40. Federal Bureau of Investigation Uniform Crime Reports and Supplemental Homicide Reports. Figures through 1994.

41. See Loftin, Colin, David McDowall, Brian Wiersma, and Talbert J. Cottey, "Effects of Restrictive Licensing of Handguns on Homicide and Suicide

in the District of Columbia,” *New England Journal of Medicine* 325 (1991):1615–1621, for a more detailed analysis of the gun law’s impact on homicide in Washington, D.C.

42. See Britt, Chester L., Gary Kleck, and David J. Bordua, “A Reassessment of the DC Gun Law: Some Cautionary Notes on the Use of Interrupted Time Series Designs for Policy Impact Assessment,” *Law & Society Review* 30(2) (1996):361–379.

43. Kansas City, Missouri, was a pilot site for the NIJ homicide project.

44. Sherman, Lawrence W., James W. Shaw, and Dennis P. Rogan, *The Kansas City Gun Experiment*, NIJ Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1995, NCJ 150855.

45. DUF data were available for Atlanta, Detroit, Indianapolis, Miami, New Orleans, and Washington, D.C. Detroit, Indianapolis, and New Orleans had more than 1 year of data; the other three cities had 3 to 9 months of data.

46. Decker, Scott H., Susan Pennell, and Ami Caldwell, *Illegal Firearms: Access and Use by Arrestees*, NIJ Research in Brief, Washington, D.C.: U.S. Department of Justice, National Institute of Justice, 1995, NCJ 163496; and *Arrestees and Guns:*

Monitoring the Illegal Firearms Market, Final Report, May 1996, NIJ grant number 95–IJ–R–014.

47. Altschuler, D.M., and P.G. Brounstein, “Patterns of Drug Use, Drug Trafficking, and Other Delinquency Among Inner-City Adolescent Males in Washington, D.C.,” *Criminology* 29(4) (November 1991):589–622; and Callahan and Rivara, “Urban High School Youths and Handguns: A School-Based Survey,” *Journal of the American Medical Association* 267(22) (June 10, 1992):3038–3047.

48. Indianapolis, for example, reported one gang-related homicide in 1996.

49. Huff, C. Ronald, “Denial, Overreaction and Misidentification: A Postscript on Public Policy,” in *Gangs in America*, ed. C. Ronald Huff, Newbury Park, California: Sage Publications, Inc., 1990.

50. Klein, Malcolm W., and Cheryl L. Maxson, *Gang Structures, Crime Patterns, and Police Responses: A Summary Report*, for the National Institute of Justice, grant number 93–IJ–CX–0044.

51. Hagedorn, John M., “Gang Violence in the Post Industrial Era,” forthcoming in *Crime and Justice*, ed. Michael Tonry and Norval Morris.

52. Fagan, Jeffrey, “The Social Organization of Drug Use and Drug Dealing Among Urban Gangs,” *Criminology* 27 (1989):633–667.

Data Sources

This appendix describes data sources used to supplement the site interviews.

Drug Use Forecasting

Staff from the Drug Use Forecasting (DUF) Program conducted interviews and obtained urine specimens nationwide from adult male arrestees at 23 sites, adult female arrestees at 21 sites, juvenile male arrestees at 12 sites, and juvenile female arrestees at 10 sites. The data were gathered quarterly, and staff at each site conducted interviews with approximately 225 adult males, 100 females, and 100 juvenile males during each quarter. Interviewers included as many juvenile females as were available (typically, fewer than 100 juvenile females were available for interviewing in any given quarter). To be eligible for interviewing, the person could not have been held in the booking facility for longer than 48 hours. (Urinalysis cannot reliably and consistently detect recent drug use beyond 72 hours after use.) More than 90 percent of the arrestees consented to be interviewed, and more than 80 percent of the interviewees agreed to provide a urine specimen. Data are reported only for individuals who both answered the survey and provided a urine specimen.

Site personnel selected adult male arrestees for interviewing on the basis of target sample size and a crime charge priority system. Where possible, personnel first interviewed felony arrestees, other than those held on drug possession and drug sales charges, so that a variety of serious arrest charges were represented in the data. Drug possession and sales arrestees were typically more numerous than other felony

arrestees, so site personnel first sought to interview suspected violent and property felons. Generally, all felony and misdemeanor charge categories were eligible for interviewing. Most sites, except those with low volumes of arrestees, did not interview individuals arrested on driving-related charges.

The jails and lockup facilities where the interviews were conducted served catchment areas. *Catchment area* refers to the community that the jail serves. In most cases, the catchment area was either an entire city or county. In other cases, however, the catchment area was a city and part of the surrounding county or part of a city and part of a county.

Urine specimens were analyzed in a central laboratory for 10 drugs: amphetamines, barbiturates, benzodiazepines, cocaine, marijuana, methadone, methaqualone, opiates, PCP, and propoxyphene. Certain commercial medications can cause a person to test positive for amphetamines. A confirmation procedure gas chromatography/mass spectrometry distinguishes amphetamine positives caused by legal medicines from those caused by illicit amphetamines. Urinalysis can generally detect recent (less than 72-hour) drug use. However, urinalysis can detect marijuana and PCP for weeks after use.

System to Retrieve Information From Drug Evidence

Data are collected for the System to Retrieve Information From Drug Evidence (STRIDE) by the Drug Enforcement Administration (DEA). STRIDE data result from a variety of transactions, including

seizures, gifts, and purchases. Data are collected for a variety of drugs, including heroin, marijuana, and cocaine. For each of these transactions, a record of purity (except for marijuana), weight, location of transaction, and other measures is obtained. In the case of purchases, a price is obtained as well. Analysts can standardize price data for a given size or weight transaction. Over time, changes in these standardized prices may provide important information about drug markets and drug-use trends.

Most of the observations in STRIDE come from DEA and Federal Bureau of Investigation (FBI) investigations.¹ Relatively little data from State and local sources enter the dataset. One notable exception is data from the District of Columbia's Metropolitan Police Department (MPD). MPD provides a substantial proportion of the observations that come from State and local reporting.

Because reporting to STRIDE is primarily confined to Federal transactions, the data may not accurately represent the set of actual local transactions and prices. This is not to say that Federal authorities pay biased prices for drugs in their undercover transactions. Presumably, attempting to pay too much or too little for drugs would trigger sellers' suspicions and result in abandoned transactions. Rather, the problem may be that Federal organizations focus their efforts on transactions that involve drugs of different weight, price, and purity than retail transactions.² Numerous methods to correct such limitations have been developed.³ Most methods involve locating and discarding outliers that represent misentered data and "ripoff" transactions and adjusting prices to reflect the quantity discount obtained for large purchases.⁴ The adjustment methodology used to determine the retail prices for cocaine that were the basis for figure 5–12 and the accompanying discussion of the effects of cocaine prices on homicide rates is described below.

Retail cocaine transactions during the study period generally involved 15 grams (about the weight of three nickels) or less of cocaine.⁵ Many STRIDE transactions were much larger. Such transactions typically involved much higher purities than retail transactions and often were made at substantial quantity discounts. To correct for these possible price distortions, gram prices were calculated from the total

transaction price divided by the adjusted weight.⁶ Prices greater than \$1,000 per gram and less than \$10 per gram were omitted as outliers. Such cases exerted high leverage over mean prices but were at the outside bounds of realistic transaction prices and probably represented either data entry errors or bogus transactions, not natural variation resulting from imperfect price/purity information.⁷ Also, fitted average retail price lines were included for reference in figure 5–12. These lines were constructed by fitting average annual retail prices to linear and quadratic models. The best-fit line was included for each price series for each city.

Notes

1. For descriptions, see Frank, Richard S., "Drugs of Abuse: Data Collection Systems of DEA and Recent Trends," *Journal of Analytical Toxicology*, 11(6) (November/December 1987):237–241; and Ebener, Patricia, Eva Feldman, and Nora Fitzgerald, *Federal Drug Databases for Use in Drug Policy Research: A Catalogue for Users*, N–3562–DPRC, Santa Monica, California: The RAND Corporation, 1993.
2. Federal authorities may also tend to focus on individuals and organizations that operate above the retail level or control disproportionately large or small fractions of the local market.
3. Two such methods are detailed in Caulkins, Jonathan P., "Developing a Price Series for Cocaine," DRU–339–DPRC, Santa Monica, California: The RAND Corporation, 1993; and Rhodes, William, Tanutda Pittayathikhun, and Laura Collins, "Estimating a Consistent Price Series for Illicit Drugs," Cambridge, Massachusetts: Abt Associates Inc., May 1995.
4. Caulkins, Jonathan, and Rema Padman, "Quantity Discounts and Quality Premia for Illicit Drugs," *Journal of the American Statistical Association*, 88 (1993):748–757.
5. See Rhodes, Pittayathikhun, and Collins, "Estimating a Consistent Price Series for Illicit Drugs," for a discussion of how to distinguish retail from wholesale transactions in the STRIDE dataset.

6. Following the suggestion of Caulkins, “Developing a Price Series for Cocaine,” the weight was adjusted by exponentiating the transaction quantity to the power of 0.8 to reflect the discount that buyers received when they purchased in larger quantities.

7. For a description of such possibilities, see Caulkins, “Developing a Price Series for Cocaine,” and Rhodes, Pittayathikhun, and Collins, “Estimating a Consistent Price Series for Illicit Drugs.”

Supplement to Homicide and Drug Analyses

Homicide and Cocaine in Other DUF Sites

Figures 5–14 and 5–15 show homicide rates and Drug Use Forecasting (DUF) cocaine prevalence rates among male arrestees in the remaining 16 DUF sites for which both homicide and DUF data were available for the years 1987 through 1994.¹ As noted earlier, homicide rates were for city boundaries, not for the larger metropolitan areas. In contrast, DUF data were sometimes collected from catchment areas that conformed to city boundaries and sometimes from larger metropolitan areas. The city and larger metropolitan county populations may have differed significantly and thus should be compared cautiously. For example, if the DUF catchment area included numerous small cities and suburban population centers, the arrestee sample may have differed significantly from the one found only inside the city boundaries. Areas for which the homicide and DUF data were drawn from the same population are marked with one asterisk (*). Areas for which the DUF data were drawn from a slightly larger population, such as part—but not all—of a county, are marked with two asterisks (**). Cities marked with a dagger (+) typically had homicide data that were drawn from the city proper and DUF data that were drawn from the county. In New York City the DUF sample was drawn from Manhattan, while the homicide rate was for the city as a whole.

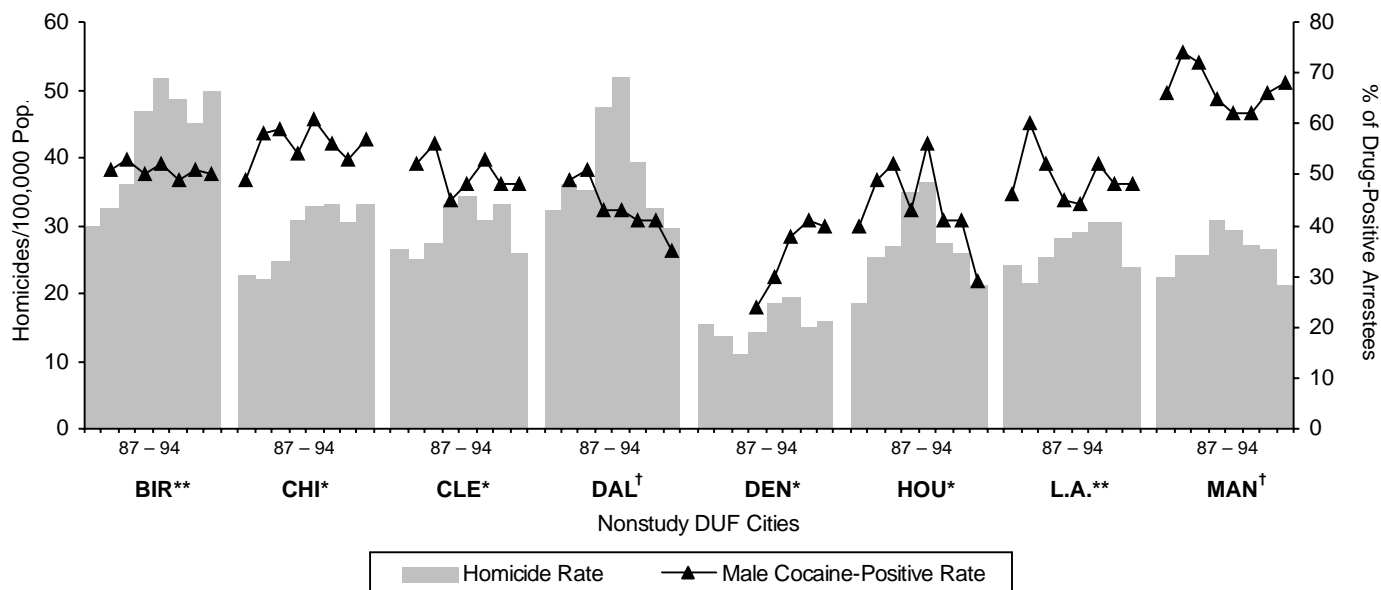
Homicide rates and DUF-measured cocaine prevalence rates correlated in the remaining 16 cities to the

same extent they did in the 6 DUF cities that were part of the homicide study. Six of the remaining 16 cities (San Diego, San Jose, St. Louis, Houston, Omaha, and San Antonio) had strong correlations between homicide and cocaine prevalence, and 5 additional cities (Chicago, Phoenix, Portland, Denver, and Dallas) had weaker, but still evident, correlations. Five cities (Philadelphia, Birmingham, New York [Manhattan], Los Angeles, and Cleveland) had homicide trends that differed substantially from the DUF-measured cocaine prevalence pattern. Table 5–11 summarizes the correlations. Of the six cities for which the trends best match each other, three have homicide and DUF populations drawn from the same pool, one has similar but not identical population pools, and two have data drawn from different populations entirely. Similarly, of the five that demonstrate the most divergence between homicide and DUF cocaine rates, two are drawn from matching populations, two are drawn from similar population bases, and one is drawn from different population bases.

Several factors are worth noting about figures 5–14 and 5–15. First, the percentage of arrestees testing positive for cocaine was generally in the same range as the homicide rate per 100,000 population. These relationships continue to suggest that the prevalence of cocaine use in a community, at least among a high-risk population, is a factor in homicide rates.

Next, given the interest in the extraordinary decline in homicides in New York City, it bears taking a closer look at the New York numbers. Manhattan's DUF-

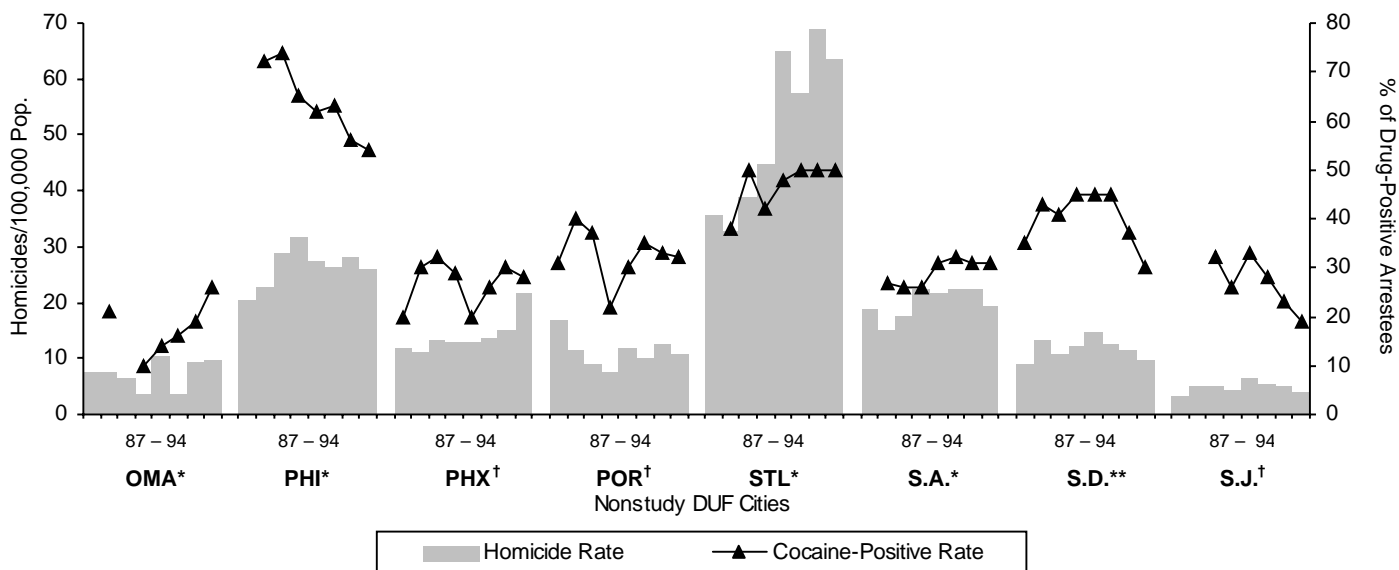
Figure 5–14. Homicide and Male Cocaine Use, Part 1



Homicide and DUF data are drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data are missing for some years and cities. The cities are abbreviated as follows: Birmingham = BIR, Chicago = CHI, Cleveland = CLE, Dallas = DAL, Denver = DEN, Houston = HOU, Los Angeles = L.A., Manhattan = MAN.

Figure 5–15. Homicide and Male Cocaine Use, Part 2



Homicide and DUF data are drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data are missing for some years and cities. The cities are abbreviated as follows: Omaha = OMA, Philadelphia = PHI, Phoenix = PHX, Portland = POR, St. Louis = STL, San Antonio = S.A., San Diego = S.D., San Jose = S.J.

Table 5–11. Correlations of Homicide Rates and Percentages of Cocaine-Positive Male Arrestees in Nonstudy DUF Cities

City	Correlation	P-Value	N
San Diego	0.8292	0.011	8
San Jose	0.7566	0.082	8
St. Louis	0.6899	0.086	7
Houston	0.6128	0.106	8
Omaha	0.5358	0.273	8
San Antonio	0.5345	0.216	8
Chicago	0.2612	0.532	8
Phoenix	0.1955	0.643	8
Portland	0.1768	0.675	8
Denver	0.1653	0.791	5
Dallas	0.1563	0.738	7
Philadelphia	-0.0888	0.850	7
Manhattan	-0.3775	0.357	8
Birmingham	-0.4484	0.313	7
Los Angeles	-0.4943	0.213	8
Cleveland	-0.5411	0.210	8

measured cocaine trend followed New York City’s homicide trend reasonably well through 1992. Beginning in 1993, however, significant departures emerged between the two trends. One possible explanation for this divergence is a change in policing strategies and tactics that may have substantially changed the character of the DUF arrestee population. Beginning in 1994, New York City police instituted a crackdown on quality-of-life crimes, including pan-handling, drug dealing, and public disorder. Other crime control strategies implemented in New York City in 1994 included efforts to reduce gun, youth, domestic, drug-dealing, and automobile-related crime and violence. Prior to the change in strategies, many of these offenses would not have resulted in arrests. These strategies were monitored through extensive use of computerized crime statistics and records checks of individuals arrested on or cited for minor charges. Individuals charged with public transit fare

evasion, for example, were frequently found to have serious outstanding warrants on their records. Thus, to some extent, these changes in policing strategies may have resulted in the arrest of individuals who were more likely to test positive for cocaine than in the past. A more detailed examination of the Manhattan DUF data before and after this change in policing strategies is in order.

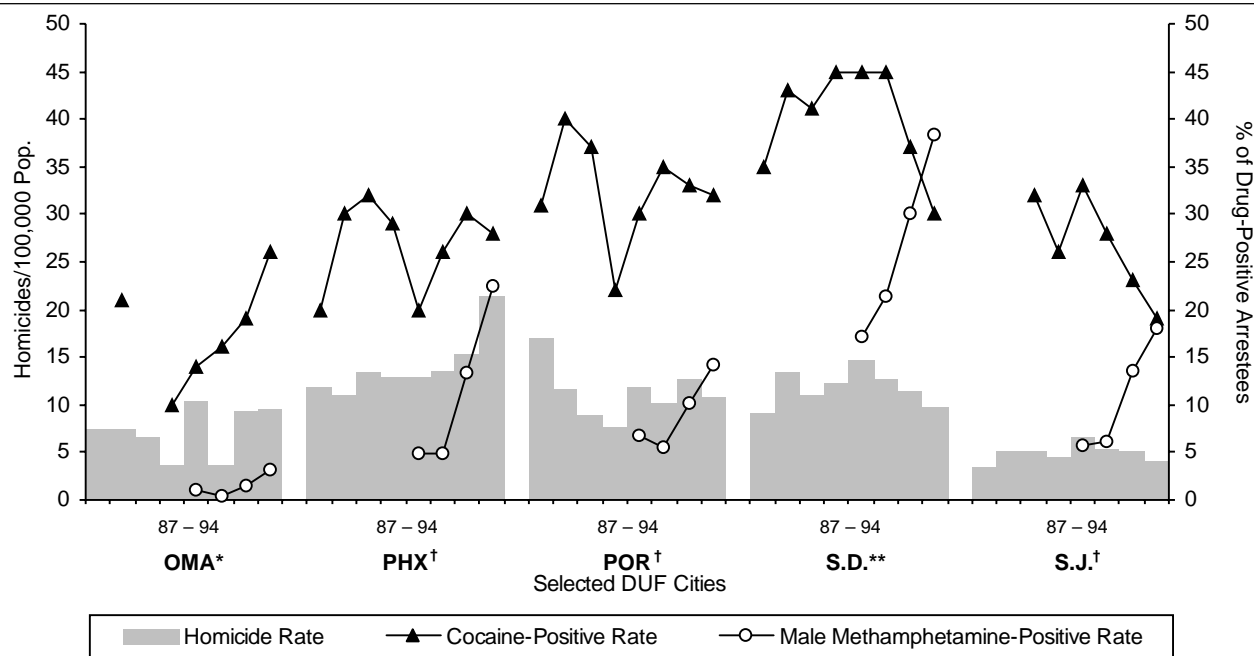
Methamphetamine and Homicide

The homicide-cocaine relationship in San Diego is of interest for a different reason. San Diego had the highest correlation between cocaine-positive rates and homicide rates. Yet in 1995, a larger share of arrestees in San Diego tested positive for methamphetamine (almost 31 percent) than for cocaine (28 percent). The methamphetamine rate recorded in San Diego was the highest in the 23-site DUF system. If there was an observable relationship between homicide and methamphetamine, one would expect it to be most visible in cities where methamphetamine use is most evident.

To some extent, methamphetamine and crack are similar drugs. Both are strong central nervous system stimulants that produce sharp highs in short periods of time. Methamphetamine is increasingly produced in large quantities and distributed widely through extensive retail networks. One result is that a dose of methamphetamine is now no more expensive than a typical dose of crack, particularly when methamphetamine’s longer lasting high is considered. This pattern of methamphetamine’s retail expansion is similar to the development and institutionalization of crack markets. In short, there are some reasons to expect that methamphetamine would exhibit a relationship to homicide similar to that of cocaine. In fact, however, the relationships are not all that similar, although they bear watching.

DUF data for methamphetamine do not go back as far as DUF data for cocaine, so it is difficult to make comparisons. DUF data did not distinguish between methamphetamine and other forms of amphetamines prior to 1991.² Figure 5–16 shows cocaine and methamphetamine trends relative to homicide rates in San Diego and other cities where methamphetamine-

Figure 5–16. Homicide and Cocaine and Methamphetamine Use by Male Arrestees



Homicide and DUF data are drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data are missing for some years and cities. The cities are abbreviated as follows: Omaha = OMA, Phoenix = PHX, Portland = POR, San Diego = S.D., San Jose = S.J.

positive percentages exceeded 2 percent. Methamphetamine-positive rates generally have been growing, whereas cocaine-positive rates generally have been declining. Several factors may account for the divergent trends. Methamphetamine markets may simply not be mature enough to mimic the pattern of crack use and crack markets. The nature of the buyer-seller relationship may still be more based on friendship and close ties and less on anonymous market transactions. As retail methamphetamine markets come to be structured more like crack markets, closer links to homicide trends may follow. This may be particularly true if crack dealers begin to perceive declining prospects in crack markets and migrate to methamphetamine markets. Methamphetamine markets, however, may never become similarly structured because of the drugs' different properties. Crack provides a brief, intense high—in contrast to methamphetamine's long-lasting, intense high. While crack users may still be on the streets and in need of more of the drug (but broke) when their high wears off, methamphetamine users are more likely to

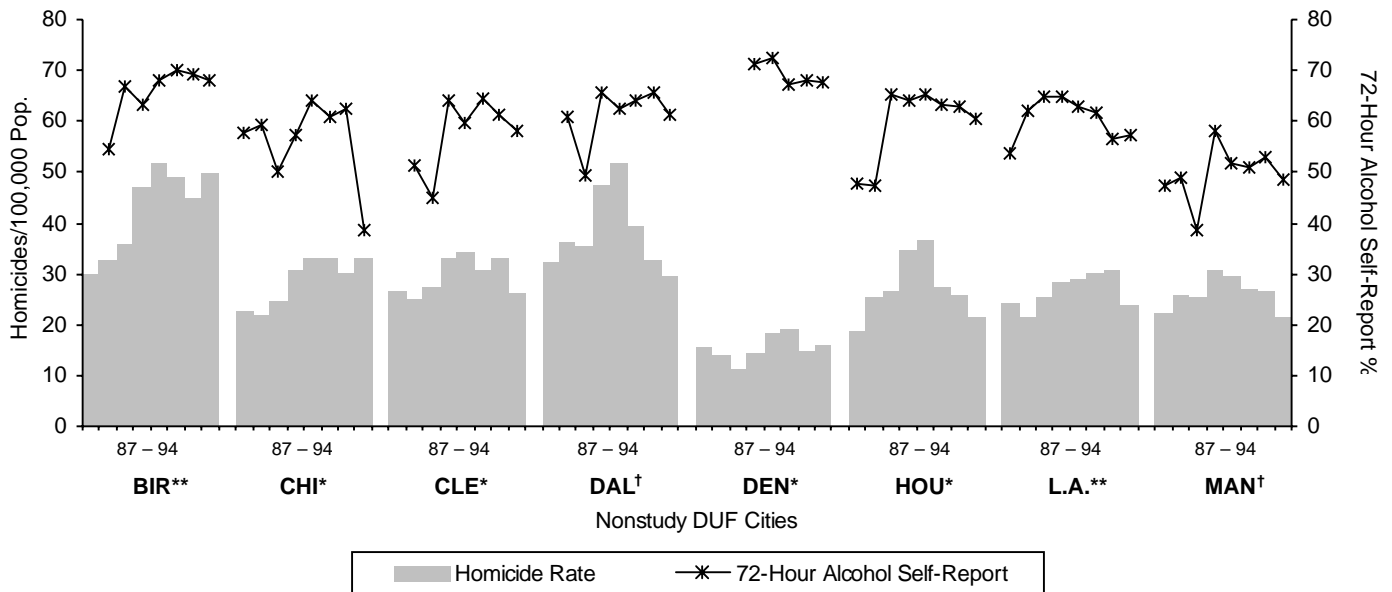
have moved out of the area where they purchased the drug in the interim. Thus, whereas crack-related violence is associated with markets and purchasing, methamphetamine-related violence may manifest itself in other contexts such as the family and the workplace. Clearly, the situation bears watching in that it may provide valuable insight as to the importance of the crack buyer-seller relationship.

Homicide and Alcohol in Other DUF Cities

Figures 5–17 and 5–18 show homicide rates and DUF alcohol prevalence rates among male arrestees in the remaining 16 DUF sites for which both homicide and DUF data were available.³ As noted earlier, the information on alcohol was self-reported and has not been confirmed by drug tests. In addition, there was a significant overlap of self-reported alcohol use and cocaine use confirmed through a drug test.

This overlap is not netted out of figures 5–17 and 5–18. Because of this confounding factor, the figures are

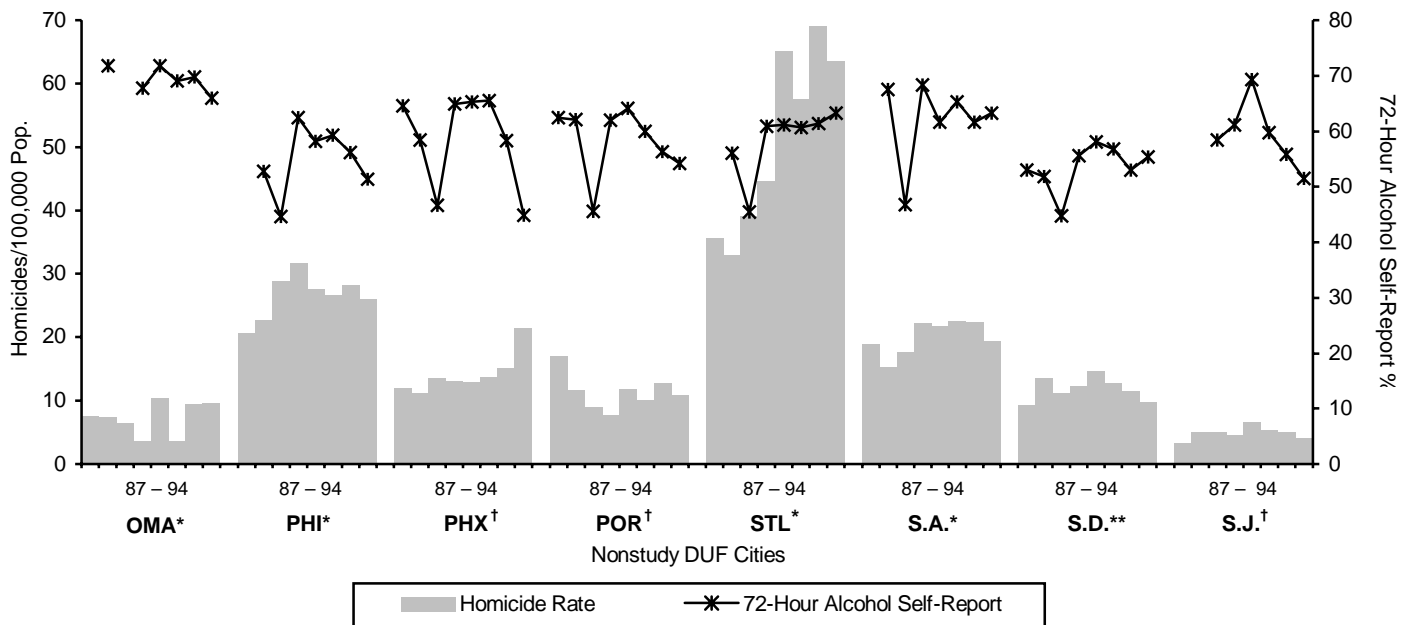
Figure 5–17. Homicide and Self-Reported Alcohol Use by Male Arrestees, Part 1



Homicide and DUF data are drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data are missing for some years and cities. The cities are abbreviated as follows: Birmingham = BIR, Chicago = CHI, Cleveland = CLE, Dallas = DAL, Denver = DEN, Houston = HOU, Los Angeles = L.A., Manhattan = MAN.

Figure 5–18. Homicide and Self-Reported Alcohol Use by Male Arrestees, Part 2



Homicide and DUF data are drawn from: *same population; **similar populations; †dissimilar populations (i.e., homicide data typically from the city proper and DUF data from the county).

Note: Although the DUF program began in 1987, not all cities began collecting data at the same time. Thus, data are missing for some years and cities. The cities are abbreviated as follows: Omaha = OMA, Phoenix = PHX, Portland = POR, San Diego = S.D., San Jose = S.J.

presented for reference, but the correlations presented for cocaine and homicide are omitted. Readers are urged to refer to the section on alcohol beginning on page 83 for a full discussion of the relationship between alcohol, cocaine, and homicide.

Notes

1. Homicide data were not available for the Ft. Lauderdale DUF site.

2. Assay testing cannot distinguish amphetamines from methamphetamine. However, gas chromatography/mass spectrometry (GC/MS) procedures can identify methamphetamine. The DUF program began using this confirmatory procedure in 1991.

3. Homicide data were not available for the Ft. Lauderdale DUF site.

Criminal Justice System Domain: Response to Homicide and Violence

The macro and micro domain chapters examined the causes and correlates of homicide and serious violence. In this chapter, the researchers explore data associated with the criminal justice system response to homicide and serious violence in the eight study cities.

The ability of the criminal justice system to affect crime rests most directly on two of four postulated functions of criminal justice: deterrence—both specific and general—and incapacitation (the other two are rehabilitation and restitution). The power of deterrence rests with the criminal justice system’s ability to apprehend and successfully prosecute and convict offenders and to impose punishments sufficiently harsh to be perceived by potential offenders as negating any potential benefits to the contemplated crime. Incapacitation, on the other hand, is a more “passive” system response; individuals are imprisoned for specified periods of time so they cannot revictimize members of the public. Public policy and sentiment currently support stringent measures aimed at enhancing deterrence and incapacitation. These are supported by public dollars directed toward increasing the number of officers in the Nation’s police departments, establishing “vertical” and “horizontal” investigative task forces to share information and resources targeted toward violent crime, and supporting States that restructure and lengthen prison sentences. The latter is perhaps best represented by “two strikes” and “three strikes” laws, enhanced penalties for carrying a gun, and “truth in sentencing” laws that limit “gain time” and other measures that may result in the early release of an inmate.

Following a long period in which the deterrent effects were tacitly assumed in the field of criminal justice, the late 1960s and early 1970s witnessed a proliferation of studies whose aim was to estimate the deterrence effects of capital punishment by comparing aggregate murder rates in jurisdictions punishing murder with life imprisonment with those imposing capital punishment, or comparing murder rates within individual jurisdictions prior to and following repeal of the death penalty.

Initially, capital punishment was found to have little short- or long-term general deterrent effect,¹ and studies on deterrence generally found no evidence of any loss in deterrent effect against the commission of murder following the repeal of the death penalty.² However, some studies of aggregate crime rates did find evidence of a general deterrent effect resulting from capital punishment statutes.³ Although Ehrlich and Yunker argue that no factors besides the repeal of capital punishment could have been responsible for the rise in murder rates observed between the 1930s and the 1970s, these analyses were ad hoc by nature and vulnerable to the criticism that an infinite number of potentially confounding historical factors were not accounted for.

For this domain, the research team examined whether or not trends in homicide appeared to be influenced by the activities of the criminal justice system—law enforcement, prosecution, sentencing, and corrections. Specifically, the researchers looked at how

police practices, multijurisdictional task forces, and punishments imposed affected homicide rates in the eight selected cities.

During the development of the data collection instruments for this domain, four research questions guided the inquiry:

- (1) Are changes in policing practices such as implementation of problem-oriented or community-oriented policing associated with changes in homicide rates?
- (2) Do Federal, State, and local task forces affect homicide rates?
- (3) Are increases in the (actual or perceived) likelihood and severity of punishment associated with decreases in homicide trends?
- (4) Do increases in incarceration rates incapacitate criminals to the extent that a decrease in the murder rate is observed?

These four questions formed the basis of semi-structured interview instruments that were administered to Federal, State, and local criminal justice agency representatives in each study city. Chief judges; criminal court presiding judges; district and county attorneys and their lead homicide prosecutors; public defenders; police department detectives; unit heads; sheriffs; agents of the Federal Bureau of Investigation (FBI), Drug Enforcement Administration (DEA), and Bureau of Alcohol, Tobacco and Firearms (ATF); and representatives from State departments of corrections were interviewed.

This chapter is divided into four sections. Section one presents a discussion of the changing law enforcement efforts regarding violent crime in the eight study cities. The discussion focuses on policing practices in public housing and the strategy of community policing in reducing violence. Section two discusses arrest policies and domestic violence and the role of task force units in reducing violence and homicide. Section three examines the effect of greater efforts at increasing punishment and the effectiveness of increased sanctions in reducing violence and homicide. Section four examines the effects of incapacitation on homicide rates in the study cities.

The remainder of this chapter presents the findings in detail, including the following:

- ◆ There was anecdotal support for the efficacy of problem-oriented policing, particularly as applied to public housing communities and public schools.
- ◆ Although there was support for community policing, interviewees believed the implementation of community policing practices was too recent to have had an impact on homicide trends during the study time period.
- ◆ Respondents expressed strong local support for the role of multijurisdictional task forces in combating violent crime.
- ◆ Interviewees presented mixed responses with respect to the perception and likelihood of increased severity of punishment. Respondents indicated an increasing problem with witness intimidation, which appeared to suggest offenders were concerned with increased punishment.
- ◆ A number of law enforcement officers interviewed said they did not think of their actions as affecting future homicide trends.
- ◆ A potential link was found between the flow of inmates from State prisons and increases in homicides in the study cities.

Law Enforcement Efforts

Law enforcement, as one of the major components of the criminal justice system, has the direct responsibility for investigating homicides. The police are responsible not only for arresting homicide perpetrators but also for responding to violent situations that may precede a serious, deadly incident. For a number of years, the institution of the police has been undergoing significant change.⁴ The role of the police has moved from reactive to proactive. Numerous efforts have contributed to the changing role of the police, but none has been more profound than the community-oriented policing movement. The advent of community policing has brought the expectation that the police are to intervene before or simultaneously with an event and that their intervention will reduce disorder-

der in the community. It is further anticipated that this new crime intervention strategy will lead to the apprehension of more offenders and reduce violent crime in neighborhoods. This strategic change has expanded the role, responsibility, and legal mandate of the police. Community policing has provided police departments with the strategy and balance to help reduce violent crime and influence the community response to violent crime.

This section describes changes in policing practices that appeared to have affected homicide rates in the eight study cities. Police department efforts and practices that focus on specific suspects, the use of community policing as an intervention strategy, policing initiatives undertaken in public housing, and policing practices and arrest policies as they relate to domestic violence are also presented.

Changes in Policing Practices in the Study Cities

The researchers focused on innovative police practices that had promise for preventing or reducing violence and homicide. They found in the study sites that police were using established “tried and true” enforcement/prevention practices. For the most part, police used targeted enforcement efforts, “hot spot” enforcement strategies, or combinations of the two. For example, representatives of the New Orleans Police Department indicated the department had practiced the strategies of targeted policing and hot-spot enforcement since 1985 and supported these approaches with a crime analysis unit.

Interviewees in the Richmond Police Department noted that they have used variations of targeted enforcement strategies for some time to curb violent crime and homicide. They indicated that for many years the department has had sophisticated crime analysis capability supporting investigation and field service units. In 1990, the unit acquired Spatial Temporal Analysis of Crime (STAC) software as part of a grant. With the software, the unit was able to demonstrate a correlation between homicides, aggravated assaults, and identified geographic drug market hot spots. This information was provided to investigation and patrol operations for enforcement activity. In 1992, the department implemented street enforcement units that used information developed by the crime

analysis unit to respond to drug and prostitution hot spots.

Interviewees in the Washington, D.C., Metropolitan Police Department expressed familiarity with targeted enforcement strategies but were unable to recall recent events where the department had utilized them. Interviewees noted that the department had a history of proceeding cautiously with the adoption of new strategies because they were concerned that a new strategy might not be appropriate for all the police districts in the city.

Representatives interviewed in Detroit said their most recent efforts at targeted enforcement strategies came from the Police Hiring Supplement award from the U.S. Department of Justice’s Office of Community Oriented Policing Services (COPS). This award, granted in 1994, allowed the city to place police officers in targeted high-crime communities. In 1995, city and police officials were able to expand these targeted community policing efforts from the initial hiring of 20 officers under the Police Hiring Supplement award to hiring 116 officers with a COPS AHEAD grant.

A few interviewees noted they were beginning to rethink the efforts of targeted enforcement strategies and institute aggressive community outreach activities. They believed less enforcement and more community outreach with a prevention perspective might reduce crime further. These respondents believed Police Athletic Leagues and similar recreation efforts held more promise for reducing violence in their high-crime communities. Interviews with officials in Washington, D.C., for example, cited D.A.R.E.[®] (the school-based substance abuse prevention program), a summer camp sponsored by the police department, and the school-based community “hub” program as having a substantial impact on adolescents.

In Indianapolis, the Weed and Seed Program was recognized as an important factor in the police department’s community prevention strategy. Funding from the Weed and Seed Program gave the police department the ability to allow police officers to meet regularly with block leaders to promote community-police relationships and gather and share crime prevention strategies. These regular meetings also

allowed police and citizens to jointly identify and focus attention on community problems with targeted enforcement strategies such as hot-spot enforcement.

Policing Practices in Public Housing

A number of interviewees pointed out the changing policing strategies in public housing developments. They noted that until the late 1970s, local police officers or the housing authority police were dedicated to policing public housing developments. Budget cuts in the late 1970s and early 1980s eliminated funding by the U.S. Department of Housing and Urban Development (HUD) and other sources, forcing the dismantling of these dedicated police efforts. A few of the sites indicated during interviews that efforts were under way to reestablish public housing police forces; these efforts were seen as a hopeful indication of the improvement in quality of life in what have been crime-troubled communities.

The Richmond Police Department has created a five-person public housing unit specifically to patrol the five largest public housing developments under the Richmond Housing Authority. Although this is a small commitment of officers to the community policing unit, the officials interviewed were impressed with the unit's effectiveness in reducing violent crime and homicide in these high-crime communities.

In New Orleans in the early 1980s, HUD had supplied funding for a number of New Orleans police officers who were responsible for policing public housing developments. The unit was disbanded, however, when funding was withdrawn in the late 1980s. HUD has since provided funding to pay overtime for New Orleans police officers to patrol developments of the New Orleans Housing Authority. During the project site visit, officials indicated the city was in the process of developing a police unit that would be dedicated to policing public housing.

Washington, D.C., was another site that had a dedicated public housing policing unit. It, too, was dissolved in the late 1970s due to lack of funding. The Washington, D.C., Metropolitan Police Department is now in the process of creating a public housing police unit to be administered by the department. Depart-

mental officials interviewed estimated that the force will total 75 officers. Interviews with officials in Detroit repeated a similar theme regarding policing public housing and funding. In 1994, a public housing police unit was begun with 50 officers. This effort was extremely well received by police and public housing officials. Atlanta was the only site that had a continuous dedicated public housing police unit, which has been in operation since late 1984.

Community Policing Efforts

For most of the cities visited, community-oriented policing and the strategy of problem-oriented policing were recently implemented. Both initiatives were implemented in Indianapolis in 1992. The Atlanta Police Department also adopted community policing in 1992. The department enhanced its community policing effort with a Police Hiring Supplement grant from the COPS Office and instituted a Police and Community Empowerment (PACE) program that deployed 45 officers to work closely with residents in high-crime areas in the city.

The Tampa Police Department's version of community policing has been to deploy officers to specific geographic areas, especially in public housing. The department received a Police Hiring Supplement grant from the COPS Office in 1994, which led to the redeployment and hiring of 30 additional community-oriented policing officers. According to officials interviewed, the calls for service and crime statistics for the areas these officers were deployed showed significant decline in 1995 compared to 1994.

Miami's community policing effort was the creation of the Neighborhood Enhancement Team (NET) in 1993. This NET unit consisted of 20 police officers focusing on crime hot spots in the city. In 1996, community policing expanded from a special unit to a departmentwide and citywide scale. Officials interviewed believed community policing held promise as a crime reduction strategy for the city, but they did not believe an appreciable effect on homicide and other violent crimes in Miami during the 10-year examination period could be attributed to community policing. NET was simply too new for officials to say with confidence that it had an effect.

Officials interviewed in Washington, D.C., on the other hand, indicated that the Metropolitan Police Department was “testing” the community policing strategy. For a number of reasons (particularly fiscal), the department was piloting the proactive strategy in a single police district before adopting it in other districts. In 1996, as the fiscal issues were being addressed, discussion and planning efforts were being made to implement the concept citywide.

Summary of Law Enforcement Efforts

Police practices discussed by the interviewees in the eight cities were variations of tried-and-true enforcement/prevention efforts. Programs like D.A.R.E.[®] and Police Athletic Leagues were considered important community outreach/prevention efforts. In Indianapolis, Operation Weed and Seed in particular was considered an integral contribution to improving police-community relationships. Respondents were asked to consider the broad implications of the innovative strategies their departments had attempted to reduce crime and violence in the past 10 years. Few individuals were able to recall what had been done specifically. Most interviewees chose to focus on accomplishments of the past few years, and those often were the result of reactive strategies. The community policing concept was often raised and discussed at length by many police interviewees. Each of the police departments visited indicated they were doing community policing in some form. In many instances, the department representative suggested they had implemented community policing during the past 3 to 4 years but only as a special unit activity attached to the patrol division. No department visited was able to claim that community policing was an agencywide operating strategy, although some thought they would come to that position in time. Community policing remains a developing crime reduction/prevention strategy for these police departments, but it is too early to characterize it as a significant homicide reduction strategy in the study cities.

The project team found little indication the community policing philosophy was taking hold in homicide investigation units. Police leaders and scholars have labored to implement the concept into the thinking and practices of patrol officers, investigators, and

managers. For the most part, the best efforts at implementation have been achieved in patrol divisions. The policing industry as a whole continues to experiment with the best practices for adapting community principles to the investigative function of policing. It was not surprising to learn from interviews with homicide investigators and unit managers that they viewed their role in preventing homicide as limited. Many homicide unit interviewees reported they believed they could do little to affect homicide trends because they saw their role as responding to the crime, with little proactive capability for prevention. The community policing concept is substantially grounded on the ability of officers to conceive of their role as proactive, not reactive.

One attractive feature of community policing is the premium placed on community outreach efforts to reduce crime and disorder. Several study sites indicated they had begun to establish or were reestablishing community policing crime prevention efforts in public housing communities. Funding difficulties experienced at the Federal and local levels in the 1970s and 1980s forced many cities to disband dedicated housing police efforts. As funding has been made available in the 1990s from HUD and the COPS Office, cities and police departments have had the financial capacity to dedicate police units to housing communities in addition to the officers provided for regular police services.

Arrest Policies and Police Practices for Domestic Violence

Chapters 3 and 4 discussed the decline in the number of intimate/family homicides and its contribution to a decrease in the overall homicide rates in some cities. The focus of chapter 4 described domestic violence intervention programs but noted that changing police practices may have helped reduce intimate/family homicides.

During interviews with police and community officials, it became apparent that many of the police departments had significantly changed their responses to domestic violence in the past few years. All departments had adopted a policy of arrest for domestic

violence. In four of the eight cities (New Orleans, Atlanta, Washington, D.C., and Detroit) a mandatory arrest policy had been adopted. The other four departments had implemented a proarrest or preferred arrest policy that required officers to justify why an arrest had not been made.

The research team's interest in the effect of domestic violence arrest policy was based on the expectation that proactive policies may prevent future intimate/family homicides by encouraging effective response to volatile situations. Table 6-1 summarizes arrest policies for each city.

City	Arrest Policy for Domestic Violence Cases	Adopted
New Orleans	Mandatory arrest	1995
Richmond	Proarrest	1992
Indianapolis	Proarrest	1990
Atlanta	Mandatory arrest	1995
Washington, D.C.	Mandatory arrest	1991
Detroit	Mandatory arrest	1994
Tampa	Preferred arrest (proarrest)	1991
Miami	Proarrest and no-drop	1994

Since 1985, the Atlanta Police Department has had a proarrest policy. However, since 1995, arrest has been mandatory for cases that involve injury or threat to life or that involve individuals with prior incidents of domestic violence. Prior to 1995, for such cases the law required either mediation, separation, or arrest; officers were required to generate a report regardless of whether an arrest was made. Atlanta also has a separate domestic violence courtroom, with six judges, where referrals to treatment are made. For the past 10 years, the Atlanta Police Department has provided new recruits with extensive classroom training that targets many types of violent crime situations (including domestic and gang-related violence). Forty hours of training are devoted specifically to domestic violence, including how to approach a home when there is a domestic dispute and where to

refer victims for assistance. Representatives of the Atlanta Police Department said they believed that the training had reduced homicide and violence by hastening intervention.

The Detroit Police Department reported recent efforts to implement a domestic violence task force. Since 1994, the department has had a mandatory arrest policy for all domestic violence cases; the perpetrator is automatically sent to jail. However, prior to the adoption of the mandatory arrest policy, officers did not need to have witnessed the offense to make an arrest. Convicted batterers must receive 26 weeks of counseling.

The Indianapolis Police Department defines domestic relationships as including cohabitants, boyfriends or girlfriends, adult family members, separated or divorced couples, and other individuals who have or previously have had a sexual and/or intimate relationship, including homosexual couples. Since 1990, Indianapolis has had a proarrest policy for domestic cases; arrest is recommended but not mandatory. Prior to the adoption of this policy, officers made arrests at their own discretion.

The Miami Police Department has a proarrest policy for domestic violence cases, with referral to treatment for victims. This policy has been in effect since January 1996, when a domestic violence unit was established as a result of new legislation mandating domestic violence investigation. Prior to the adoption of the proarrest policy, domestic violence arrests were based on officer discretion and victim cooperation.

The New Orleans Police Department currently follows a mandatory arrest policy and refers offenders to treatment. This policy came into effect in 1995 as a result of legislation passed in 1994. Prior to this legislation, officers arriving at a domestic incident simply provided counsel.

A preferred arrest policy is currently in place for domestic violence cases in the Tampa Police Department. An officer must justify why an arrest was not made, and the policy permits a misdemeanor arrest on probable cause even when there was no witness to domestic abuse. An arrest is required if the officer witnesses violence, sees physical evidence of violence, hears victim testimony to that effect, or receives a third-party witness account (as from a child).

The Tampa Police Department reported that its arrest policy was altered because of legislation passed in 1991. Prior to that change, police officers were only required to write a report and refer the complainant to the State's attorney's office for prosecution if desired. While there is no mandated referral to treatment, the police must report the incident to the women's shelter within 24 hours, and the shelter must contact the complainant within 2 days for a needs assessment and a safety assessment. Following a first arrest, the arrestee is usually released on condition that he or she attend counseling or a domestic violence program. Following the second arrest, 30-day detention is mandated, with 6-month detention mandated following the third arrest. Community policing officers in Tampa are trained as "domestic violence investigators." They take photographs at crime scenes, collect physical and testimonial evidence, and make copies of medical reports related to the incident. These officers are also equipped to collect evidence so the State can proceed with a case against an offender even if the victim/witness later recants testimony or drops the charges. All of the criminal justice representatives the project spoke with assured the research team that prosecution (following initial intervention through arrest and initial appearance before a domestic violence judge) now occasionally occurs. Recently, the Tampa Police Department has begun to target homicide cases with domestic characteristics for more thorough examination (asking, for example, "Did the victim have a restraining order?" "Were there repeated calls to the police prior to the homicide?" "How had the police responded in the past to calls for service for that victim?").

The Richmond Police Department defines domestic violence as an assault on a family or household member. The department has had a proarrest policy for domestic violence cases since July 1992. Prior to the adoption of this policy, officers only advised the complainant to take out a warrant. The Richmond Police Department is currently reviewing domestic violence procedures and cooperative efforts with other agencies. Through a Federal grant, the department will revise first-responder training for officers, including evidence collection and assistance to victims. They will visit model program sites to borrow ideas from existing programs. The overarching goal is

to devise a cohesive community response to domestic violence. They also plan to revise reporting so that domestic statistics can be maintained. Additionally, changes in Virginia law regarding domestic violence were enacted in July 1997, requiring arrest if there is any evidence of an assault.

The Washington, D.C., Metropolitan Police Department had a proarrest policy for domestic violence cases prior to 1985. In 1991, as a result of new legislation, a mandatory arrest policy was initiated, and all active patrol officers are trained regarding the implications of this law.

As with other policing practices, interviewee comments concerning policies and practices in response to domestic violence tended to focus on the most recent changes. This pattern precluded the researchers from linking these reforms to changing homicide trends, even though chapter 3 showed that decreases in domestic violence homicides were an important element in those cities with decreasing overall homicide rates.

Multiagency Task Forces

The creation of multijurisdictional task forces has always held interest for local law enforcement officials. Task forces create a multiplier effect when they are directed toward a specific criminal operation or enterprise. Members bring special skills and expertise that in combination provide improved communication and allow for more efficient operations when investigations cross jurisdictional boundaries than could be achieved on a bilateral or multilateral basis. Further, task forces provide the ability to dedicate resources (persons and equipment) to systematic and strategic efforts for the investigation of criminal activity as well as the capability to select the most appropriate charges to build cases for prosecution and to utilize higher penalties available in Federal statutes.

Multijurisdictional task forces are powerful investigative approaches, which is why the concept was of interest to the project team. None of the study sites had formed a multijurisdictional task force that focused directly on homicides. However, the study sites all had combined Federal, State, and local law enforcement resources to address a diverse range of

issues, including drug smuggling and dealing, weapons use, and violent crimes. Therefore, it is not unreasonable to think of the task force concept as a sophisticated variation of the strategy of targeted enforcement. Multijurisdictional task forces generally have the resources that allow for the collection, analysis, and investigation of diverse amounts of information.

This study found no single event that brought about the creation of a task force in a jurisdiction. In most instances, task forces were formed because of the prevalence of a persistent type of crime or the number of crimes plaguing a city. For example, the Metropolitan Police Department (MPD) in Washington, D.C., had over three times as many homicide cases in 1990 as in 1985 (from 144 to 458 cases). The agency's clearance rate was unacceptable and officials decided they had to do something. MPD thus reactivated a cold-case homicide investigation squad to examine unsolved murders. This task force included substantial FBI participation to assist MPD officers.

Task forces and interagency cooperation. Although interagency cooperation varied significantly among the eight cities, cooperative law enforcement activities were taking place in all of the study sites. Representatives from lead agencies could readily describe the scope and aim of the task force's operations, as could most support agencies. It is not clear, however, that any one organization within a city or jurisdiction was aware of all task forces that were operating in the area. Rather, promoting awareness of the task force generally appeared to be the lead agency's responsibility.

Most cities reported excellent relations between Federal and local authorities on task force and cooperative issues. In some cases, this cooperation was notable because tensions in other areas did exist. For example, despite a recent FBI investigation into police corruption in New Orleans, representatives from the New Orleans Police Department have been regularly assigned as liaison officers to Federal task forces such as those sponsored by the U.S. Attorney, FBI, DEA, and ATF. Respondents from both Federal and local organizations in New Orleans reported that the investigation had not hampered task force cooperation. Similarly, Detroit's cooperation with Federal task forces is rebuilding after a prolonged period of strain. Former Mayor Coleman Young and members

of his administration were the target of numerous Federal investigations. As a consequence, Mayor Young prohibited much cooperation with Federal authorities. Under Mayor Dennis Archer, Detroit's cooperation is reported to have grown substantially. Both Federal and Detroit officials reported outstanding relations that have allowed task forces to undertake major cooperative efforts in recent years.

Perceived impact of task forces. Task forces are perceived to be effective across sites and are credited with measurable achievements, including important arrests and convictions of individuals and members of notorious criminal enterprises. Perceptions of effectiveness hold up regardless of task force type, length of operation, location, and membership.

Four Task Force Arrangements

Multijurisdictional task forces are created for a number of reasons; however, the researchers synthesized municipal participation into one of four types of arrangements: violent crime and fugitive task forces, drug task forces, gun task forces, and "other" task forces (a catchall grouping).

Violent crime and fugitive task forces. In Richmond, multijurisdictional task forces were perceived by both local and Federal criminal justice representatives to have had a "significant impact on homicide and violent crime in this city." Since 1990, the Richmond U.S. Attorney's Office (USAO) has worked closely with the Richmond Police Department, DEA, FBI, ATF, and neighboring county agencies to address drug- and nondrug-related violent crime. These efforts have targeted individuals and organizations believed to be among the most dangerous in Richmond. As a result, over 30 offenders have been convicted. Information developed through these cases has cleared numerous unsolved homicide investigations and resulted in lengthy Federal prison or death sentences for several convicted murderers.

The DEA Metropolitan Richmond Task Force, established in 1990, includes narcotics detectives from the DEA; Richmond Police Department; Virginia State Police (VSP); Henrico, Chesterfield, and Hanover Counties; and the City of Petersburg. Two major Metropolitan Richmond Task Force investigations in

1995 culminated in the successful prosecution of over 20 members of two drug-trafficking organizations that had controlled a Richmond public housing complex. The Safe Streets Task Force, created in 1991–1992, includes agents from the FBI, Richmond Police Department, and VSP who investigate drug distribution in several violent neighborhoods. Through 1995, the Safe Streets Task Force had obtained more than a dozen convictions of major drug traffickers, including a group who was responsible for numerous murders and controlled drug distribution in a Richmond public housing community. The Cold Homicide Task Force, formed in 1994, involves the FBI, Richmond Police Department, and VSP. The Cold Homicide Task Force identified a major East Coast drug organization responsible for 12 homicides in Richmond, Virginia Beach, and New York City.

Washington, D.C., should be distinguished from the other seven cities in this study. When it comes to Federal law enforcement, Washington, D.C., is unique because of the many Federal law enforcement agencies operating in the city. The FBI, for example, has a Washington, D.C., office with more than 80 agents in addition to the national headquarters. Most cities the size of Washington, D.C., have offices with fewer than 20 agents. A byproduct of this Federal presence is an abundance of task forces, although local-Federal cooperation is not always guaranteed by these working arrangements.

Since 1994, DEA has operated the District of Columbia Narcotics Squad, which also involves FBI and MPD officers. This squad has closed more than 4,500 cases.

Washington, D.C., also has a Safe Streets Task Force that was implemented in October 1991 and involves 17 FBI agents, 10 MPD officers, 1 ATF agent, 1 U.S. marshal, and 1 representative from HUD. The homicide trend in Washington, D.C., started downward in 1991. The goal of Safe Streets is to investigate and prosecute violent gangs by focusing on Racketeer Influenced Corrupt Organization (RICO) cases and Continuing Criminal Enterprise (CCE) cases. Representatives for the MPD and the FBI felt that this task force has had a direct impact on the level of violence in the city. The accomplishments of this task force include the prosecution of approximately 70 gangs. The task force typically solves five to six homicides

per gang identified. The District of Columbia's Operation Cease Fire has been in effect since 1995 and involves the MPD and USAO. Together these agencies have been involved in gun recovery in six of seven police districts in Washington, D.C. Approximately 90 percent of these cases have resulted in prosecutions.

In Tampa, the FBI's Fugitives Task Force was reported to be very successful in tracking down and arresting suspects wanted for violent crime. Interviewees in Tampa also mentioned that the FBI's technological assistance for evidence—photos, records, DNA, etc.—has proven very useful. Task forces in Tampa were said to have been helpful in investigations involving wiretaps because they enabled 24-hour surveillance to be conducted by multiple agencies, lessening the drain on any single agency's investigative resources. DEA runs a State-local drug task force in Tampa. It has a separate budget, including expenses for travel, overtime, and information purchases. One group works in Tampa exclusively, consisting of 1 supervisory DEA agent, 4 DEA special agents, and 10 State and local law enforcement officers.

Detroit's Fugitives Task Force involves the FBI and the Detroit Police Department (DPD) and has as its main purpose recapturing wanted felons and convicts who escaped in prison breaks. Detroit's Violent Crime Task Force, established in 1994, involves the FBI, State police, and DPD and was cited by law enforcement representatives in Detroit as the most important task force with respect to murders and nonnegligent homicides. In addition to the Fugitives Task Force, the Violent Crime Task Force was reported to have helped especially in resolving unsolved murder cases, thus improving the homicide clearance rate. The Detroit Police Department reported that many of its most effective task forces involved the ATF, DEA, and FBI. As many as 15 officers are regularly assigned to work with the ATF, DEA, and FBI on a daily basis, although these projects are not necessarily established as task forces.

Drug and drug crime task forces. Every jurisdiction reported that its Organized Crime and Drug Enforcement Task Force (OCDETF) was highly effective. Operated out of the U.S. Attorney's Office, OCDETFs

tackle the community's most complicated drug cases. Task force members report that many defendants fear the group, in large part because of the sanctions that can come with an OCDETF prosecution.

High Intensity Drug Trafficking Area (HIDTA) task forces are unique in that there are relatively few of them and they tend to be well funded. The Atlanta HIDTA, while only recently formed in October 1995, involves representatives from the Atlanta Police Department gangs unit, DEA, FBI, Georgia Bureau of Investigation, Metropolitan Atlanta Rapid Transit Authority (MARTA), Georgia State Police, and National Guard. This task force, like the other HIDTAs in the study, was perceived to be promising because of the sheer amount of resources being brought to bear on the problem.

Gun and gun crime task forces. In Richmond, Project LEAD, which is coordinated by ATF and Richmond Police Department participants, is a task force that seeks to assemble all data on firearms recovered from arrests, searches, and crime scenes to identify sources that provide multiple firearms used in crimes. These efforts successfully identified a licensed dealer who sold over 600 handguns unlawfully, many of which were recovered later at scenes of drug offenses or violent crimes. Representatives from the Tampa Police Department also informed project team researchers that they work closely with ATF to trace firearms. The Tampa Police Department recently received a Bureau of Justice Assistance grant to review over 800 firearms cases, 550 of which are currently being traced by ATF as part of what is referred to locally as "Project Trackdown." Tampa Police Department officers often work to have Federal charges filed to obtain longer sentences.

Other task forces. Authorities in Indianapolis formed the Gang Task Force, initiated by the Indianapolis Police Department in 1987, to address gang problems. A similar force was formed in 1995 in Miami to address the increasing problem of Haitian gang violence. Law enforcement officials in Miami maintain, however, that this task force has little direct effect on rates of violence and homicide in the city, even though it has been successful in clearing some gang-related violence cases. The antigang task forces were perceived to be more reactive than proactive.

Miami also developed a task force to deal with a narrow issue: tourist robberies. A number of highly publicized tourist robberies and murders in Miami caused great concern among Florida's law enforcement community, eventually resulting in the creation of the Violent Street Crimes Task Force, the Tourist Robbery Task Force, and a robbery clearinghouse. Run out of the Metro-Dade Police Department, the robbery clearinghouse serves as a central analysis point for robberies in the greater Miami area and has the clearance of robberies as its primary function. Members of this interagency clearinghouse include agents from the FBI, ATF, U.S. Marshals Service, postal inspectors, and local law enforcement. Law enforcement officials in Miami generally felt interagency cooperation was instrumental in reducing Miami's robbery rates. The success of the clearinghouse was largely attributed to the agencies' ability to draw on one another's intelligence. The Tourist Robbery and Violent Street Crimes Task Forces appeared to be the two most active multiagency cooperative programs in the Miami area.

Witness Cooperation, Protection, and Intimidation

A recurring theme throughout the interviews with law enforcement officials was the difficulty in ensuring witness protection. Although there seemed to be a great deal of interagency cooperation in dealing with witness protection, representatives from each of these agencies maintained that they often do not have sufficient resources to guarantee such protection. Respondents also noted that ensuring protection has the potential of being a long, bureaucratic process. Some Federal representatives reported that they often had to use out-of-pocket money or other office cash for witness accommodations. Both Federal and local law enforcement authorities maintained that they received abysmal cooperation from witnesses in violent crime cases, mainly because such individuals did not believe their safety could be guaranteed. Despite these constraints, officials believed that there was an increasing demand for relocating innocent bystander or victim witnesses and that such offers were often necessary to gain cooperation. Authorities stressed that few witnesses had actually been retaliated against in their jurisdictions and that calls for relocation and protection appeared to be perception driven.

Some law enforcement officials questioned whether diminished witness cooperation was a function of intimidation. It was felt that for a significant number of murder cases, the witnesses were themselves guilty of certain crimes and their criminal involvement fueled their reluctance to cooperate. In many of these instances, witnesses possessed firearms that, depending on the jurisdiction, could be a crime itself. Washington, D.C., passed gun legislation in 1994 that upgraded unlawful possession of a firearm outside the home to a felony offense. Thus, to secure cooperation from some witnesses, authorities had to ignore witnesses' violations or use the threat of sanctions to encourage witness cooperation. Federal agents told interviewers that offering departures from minimum mandatory sentences was crucial to gaining cooperation from criminal witnesses.

Other criminal justice officials felt that citizens and community groups were increasingly concerned with the issue of victim and witness intimidation. Although community policing has had a positive impact on citizen cooperation, witness and victim intimidation was believed to be the primary barrier to gaining the cooperation of citizens in violent crime cases. Interviews with community organizations supported this contention. They felt that police did not have the resources to protect persons who were victims of or witnesses to violence. The lack of citizen cooperation is exacerbated by what is perceived as an overall lack of confidence in a police department's credibility. Homicide detectives indicated that victim and witness intimidation was the major barrier to the investigation and prosecution of homicide and violent crime.

Summary of Task Force Issues

Federal authorities were perceived to be filling vital gaps with respect to local law enforcement challenges. The issue and the perceived impact varied by community. In Tampa, the primary issue was wiretapping. Respondents felt that State laws impeded the use of wiretaps; task force participation with Federal organizations allowed them greater access to this tool. In Washington, D.C., cooperation with Federal authorities was valued because of issues pertaining to witness immunity. In all eight sites, respondents said Federal laws, law enforcement, prosecution, and task

forces were extremely helpful in fighting organized criminal enterprises, gangs, and guns (see chapter 5). Federal participation was also valued because Federal sanctions and sentences are usually more severe.

Despite the perceived effects, however, it was not possible to link specific task forces with general changes in homicide trends. In the District of Columbia, for example, the homicide trend began to drop (at least through 1994) just after the Safe Streets Task Force became active at the end of 1991. By comparison, however, Richmond's homicide trend remained unchanged during the years following the creation of its Safe Streets Task Force, and the count actually increased substantially in 1994. Moreover, multiple task forces are often in operation at any one time. Thus, it was impossible for this study to discern the impact of any one of them on local homicide rates. Some task forces, such as cold-case squads, have most of their impact on closure rates, while others, such as violent crime task forces, may have a preventive impact.

There were several limits found to the task force model. The first was that, whatever their effectiveness, task forces could address only a small fraction of the crimes occurring in a community. It was not clear to what extent task forces tended to take cases where the odds of prosecution and conviction were more assured. The other side of this observation, however, was that task forces were credited with taking complicated cases that, because of a community's resource, manpower, and legal limitations, likely would not have been pursued.

Incapacitation and Deterrence: The Effect of Inmate Flows

Significant changes in sentencing, probation, and parole practices occurred in all eight of the study sites between 1985 and 1994. In most cases, sentencing has become more severe, and penalties for specific offenses and reoffending have increased. In many cases, those arrested and convicted are now required to serve larger fractions of their sentences. Early release has been eliminated or severely curtailed in some cases. In each of the eight cities that were part of the study, there have been significant legislative

changes relating to incarceration and sentencing. An overview of these factors is presented below.

In Louisiana, new truth-in-sentencing legislation requires that convicted felons serve mandatory minimum sentences. Habitual offender statutes (“three strikes”) mandate life sentences without parole in cases involving offenders with three felony convictions for violent crimes. Additional legislation also mandates the imposition of a sentence of life imprisonment for cases defined as “drive-by shootings.” Other legal changes include the imposition of sentences without the possibility for parole for first-time violent offenders and all cases involving handguns. Washington, D.C., passed a local law in May 1992—the Public Safety Support Amendment Act—mandating a minimum sentence of 30 years without parole for murder convictions (with a discretionary option of life without parole for particularly heinous cases). In addition, as of June 1994, truth in sentencing mandated that 85 percent of the offender’s time be served for all violent convictions. Florida recently passed repeat-offender and truth-in-sentencing legislation. Violent offenders in Florida now must serve at least 85 percent of their sentences.

Cumulatively, these changes in sentencing and adjudication practices could be expected to have a significant impact on crime in the community. Not only would these changes keep criminals *incapacitated* for longer periods of time, they might also be expected to *deter* other offenders by raising their perceptions of risk. The project team examined the possibility of these effects at the community level by analyzing Bureau of Justice Statistics National Corrections Reporting Program (NCRP) data.

From NCRP data, it was possible to tabulate gross admission and release counts for the study sites. Generally, NCRP data are reported at the county level. Thus, with the exception of Washington, D.C., New Orleans, and Richmond, the NCRP data were from larger jurisdictions (counties) than the study sites. Subtracting admissions from releases provided an idea of the flow of prison commitments over time in each of the jurisdictions.⁵

Figure 6–1 provides some indication that net admissions (or releases) may be related to homicides in

communities. For example, Detroit can be described as a site in which incapacitation is most likely occurring. Through 1990, Detroit had at least 500 more people committed to prison than were released each year. Commitments continued to outpace releases in Detroit until 1993. Throughout this period, Detroit’s murder count continued a general downward decline. In Washington, D.C., on the other hand, at least for the years 1985 through 1988, there were many more releases than admissions. During those years, Washington, D.C.’s, homicide rate climbed substantially. The trends and patterns in other cities are not as visible, in part because of missing data.⁶

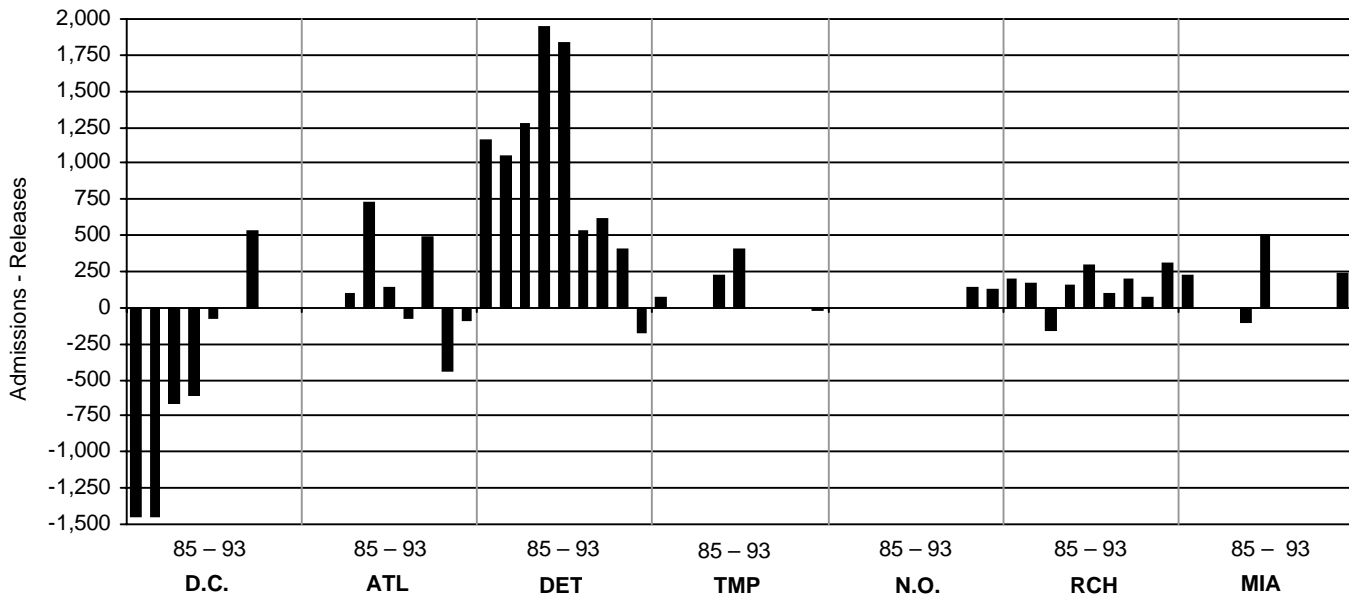
There are other factors that may explain the patterns observed in Detroit and Washington, D.C., and there are data that should be obtained before drawing firm conclusions. For example, rising crime rates might have been driving the net increase in admissions in Detroit, and a falling crime rate might explain the net increase in releases in Washington, D.C. Similarly, disaggregated data that showed admissions and releases by felony charge would be preferable to aggregated data. Certain types of felonies, no matter how many are released, are less likely to affect homicide rates. Felony property and drug-possession offenders, for example, may not adversely affect local homicide trends, even if they are released in great numbers. Disaggregated data might show, however, tighter links between certain types of net releases (homicide, aggravated assault, and robbery, for example) and homicide trends. In short, more analysis on this subject is needed.

Likelihood and Severity of Punishment

The next hypothesis assessed was whether changes in actual and/or perceived likelihood or severity of punishment were associated with changes in homicide rates. This was a complex hypothesis with many implicit components, some of which were more open to study than others. There were two factors pertinent to the hypothesis: (1) Did the likelihood change? and (2) If so, did the change affect homicide rates?

One key component to the hypothesis was the perceptions that potential homicide perpetrators hold concerning the likelihood of being caught and punished if they commit murder.⁷ However, perceptions of

Figure 6–1. Inmate Flows, 1985–1993



potential homicide perpetrators are extremely difficult to measure. Instead, the researchers took three alternative approaches:

- (1) Knowledgeable individuals were asked to estimate the changes in potential perpetrators' perceptions concerning the likelihood of being arrested, the likelihood of being punished, and the expected severity of any punishment.
- (2) The same individuals were questioned on their own perceptions of the risk perpetrators faced in each of these areas.
- (3) The researchers estimated actual risk using available data.

To the extent possible, the team also examined the relationship between perceptions and available data to assess the extent to which perceptions were related to reality.

To be punished, a perpetrator must be arrested, prosecuted, and convicted. Available data and interviewee responses were used to assess the actual and perceived likelihood of each step of this sequence. However, the likelihood and perceived likelihood of *arrest* were far more important than the likelihood of

subsequent events. Simply stated, as offenders' perceptions of the likelihood of being arrested decrease, the likelihood of outcomes subsequent to arrest becomes less important. If one believes that one is unlikely to be arrested, it matters little what one thinks would happen if one were to be arrested. Therefore, the analysis focused on likelihood of arrest.

This section will first address changes in the likelihood of arrest, as measured by clearance rates, and the extent those changes were related to changes in homicide trends. These discussions will include likelihood of prosecution, likelihood of conviction, and likely severity of punishment and their respective relationships with homicide. On related issues, the impact on clearance rates of changes in victim/offender relationship and of changes in witness cooperation will be examined.

Likelihood of Arrest

The relationship between homicide clearance rates and homicide perpetration rates is not simple. On the one hand, if clearance rates fall, potential homicide perpetrators may become less concerned that they will be caught and punished for their crime and may there-

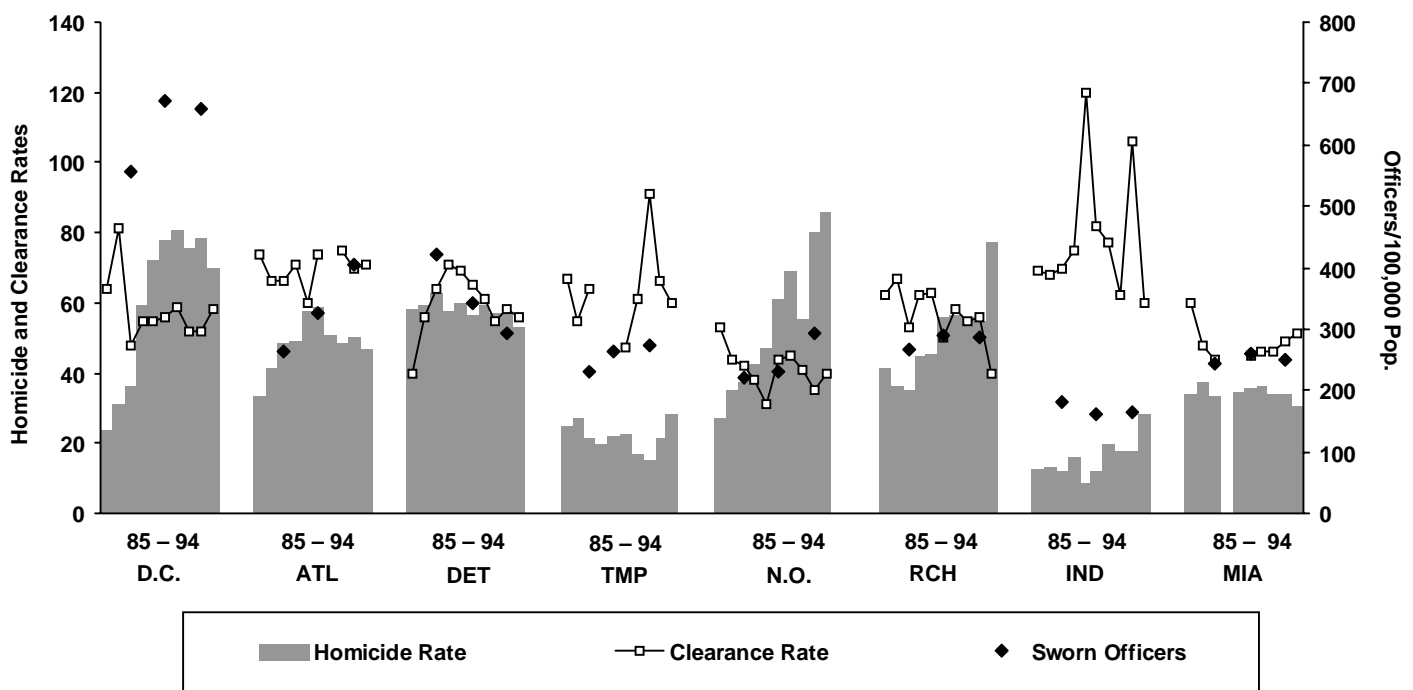
fore commit murders they would not otherwise, causing the homicide rate to increase. In this scenario, a negative correlation is expected between clearance rates and homicide rates. The same negative correlation may result if homicide rates influence clearance rates: If a city experiences a dramatic increase in homicides—as some of the eight study cities did—the police department may not have the resources to pursue every case as intensively as it otherwise would, and clearance rates will drop. There is yet another possibility that may result in a positive relationship between clearance rates and homicide: If the homicide problem reaches such proportions that pressure is brought to bear on the police to “do something,” extra resources may be devoted to solving homicide cases, thus increasing clearance rates.⁸ In light of these varied—and not mutually exclusive—possibilities, the researchers looked carefully at clearance rates and homicide trends.

Figure 6–2 shows the homicide rate (homicides per 100,000 population), homicide clearance rates (percentage of homicides cleared by arrest), and number of sworn police officers per 100,000 population (adjusted for city size) for each city. Homicide rates and clearance rates are presented for each year from

1985 to 1994 for which Uniform Crime Reports Return A data were available. Officer rate data are presented for 1987, 1990, and 1993, the years in which the Law Enforcement Management and Administrative Statistics survey (Bureau of Justice Statistics) on which they are based was conducted.

In figure 6–2, different trends are seen across cities in the interrelationship of homicide rates, clearance rates, and police force size. In Atlanta, from 1985 through 1990, clearance rates were falling and homicide rates were rising; from 1990 through 1994, homicide rates fell and clearance rates rebounded. The decrease in the homicide rate and improvement in the clearance rate coincided with an increased police force, suggesting that the increased force may have been linked to subsequent improvements in homicide victimization and clearance rates. In Washington, D.C., clearance rates were quite stable from 1987 on, while homicide rates increased sharply (followed by a slight downturn). The size of the force jumped from 1987 to 1990, but homicides continued to increase through 1991—and clearance rates remained low. The size of the force dropped between 1990 and 1993, so it is difficult to credit it with the drop in homicide. In New Orleans, the clearance rate decreased from 1985

Figure 6–2. Homicide Victimization and Clearance Rates, 1985–1994



to 1990 as the homicide rate soared. Slight improvements in the clearance rate accompanied increases in the police force in 1990 and 1993. Homicides continued to increase, however. In Richmond, clearance rates continued a sporadic downward trend from 1985 through 1994 while homicide rates continued to increase. A slight improvement in the clearance rate followed a modest increase in force size in 1990; in the next few years, however, the force shrunk slightly, homicides continued to increase, and clearance rates continued to worsen.

The interrelationship among homicide rates, clearance rates, and police force size is less compelling in the other cities. In Detroit, clearance rates improved greatly from 1985 through 1989 but gradually fell back to 1986 levels by 1992. Meanwhile, the force was shrinking and homicides were decreasing. In Indianapolis, clearance rates remained generally high (though variable) as homicides increased from 1989 on and the force size fluctuated slightly. In Miami, homicides, clearance rates, and force size remained fairly stable throughout the study period (though homicide and clearance rate data are missing for several years). Analysis of the situation in Tampa is also hampered by missing data, but in the early 1990s

the police force grew slightly, homicide decreased, and clearance rates improved.

To further explore the relationship between clearance rates and homicide rates, Spearman's rho, a nonparametric measure of linear association whose interpretation is similar to the more familiar Pearson's r, was computed (see table 6-2). Combining all eight cities, there is a strong negative correlation between annual homicide clearance rates and annual number of homicides during the same year ($\rho = -0.39$, $p > 0.01$). Looking at individual cities, this negative relationship is statistically significant for New Orleans, Richmond, Washington, D.C., and Miami, with Atlanta, Indianapolis, and Tampa showing nonsignificant but similar trends. In Detroit, the correlation is close to zero.

As discussed above, the negative correlation between clearance rates and homicide counts seen in many cities may be due to clearance rates affecting homicide, to homicide affecting clearance rates, or both. To help clarify this relationship, the correlation between clearance rates and 1-year lagged homicide counts (for example, correlating clearance rates in 1985 with homicide counts in 1986) was computed (see table 6-2, right column). The researchers

Table 6-2. Relationship Between Clearance Rate and Homicide Count

City	Homicide Clearance Rate Same-Year Homicide Count	Homicide Clearance Rate and One-Year Lagged Homicide Count
	Spearman's rho	Spearman's rho
All eight cities	-0.390*	-0.303*
Atlanta	-0.409	-0.488**
Washington, D.C.	-0.704*	-0.693*
Detroit	0.150	-0.103
Tampa	-0.274	0.322
New Orleans	-0.591**	-0.691*
Richmond	-0.482**	-0.409
Indianapolis	-0.406	-0.182
Miami	-0.542**	-0.315

* $p > 0.01$ one-tailed, ** $p < 0.05$

assessed whether the clearance rate during any one year was related to the following year's homicide count. The pattern of results for this correlation strongly resembled that between homicide and clearance rates within a given year (i.e., unlagged). When using lagged homicide counts, there was a strong negative correlation with clearance rates for all eight cities combined. Three of the four individual cities for which the previous statistically significant negative correlation held (Washington, D.C., New Orleans, and Richmond) also showed a statistically significant negative correlation using lagged homicide counts. Miami, the fourth city, showed a nonsignificant negative correlation using lagged homicide counts. In Atlanta, the previous correlation was not quite significant at the 0.05 level ($p=0.07$); using lagged homicide counts, the negative correlation with clearance rates was significant.

Based on this analysis, at least for some of the eight cities, decreased clearance rates one year were followed by increased homicide counts the next year. One plausible interpretation is that perpetrators were emboldened by the decreased probability of being caught. (In this scenario, one need not assume that potential perpetrators were consulting clearance rate data; informal "data" from the street would suffice.) Note that the cities in which this relationship held were those cities that experienced rapid homicide growth, either throughout the timeframe (New Orleans and Richmond) or for part of the timeframe, followed by decreases (Washington, D.C., and Atlanta). Interviewee comments in these cities supported the belief that offenders did not expect to be caught.

In Atlanta, interviewees were confident in the criminal justice system's ability to capture and severely punish violent offenders, but they did not think these components of punishment had changed significantly in the past 10 years. More important, interviewees believed that offenders did not perceive the risk of punishment for committing a violent offense as being severe or certain. All respondents thought violent criminals perceived their risk of being apprehended as unlikely, and only one respondent thought offenders viewed their potential punishment as severe.

In Washington, D.C., an interviewee reported that it was highly likely that serious violent offenders would

be arrested and that the likelihood had increased since 1985. The same interviewee reported that offenders did not think that arrest for violent offending was likely, though this perceived likelihood of arrest for most offenders has increased since 1992. It is not apparent how these two statements correspond to each other or to the declining homicide clearance rate observed in Washington, D.C., during much of the timeframe. If the last statement about perceived changes in likelihood of arrest is accurate, it would support the hypothesis, as homicides in Washington, D.C., started declining in 1992.

In New Orleans, interviewees reported that the typical serious violent offender did not believe that he was likely to be arrested for any one violent act, and that over the last decade arrest for a violent offense was perceived as increasingly less likely. Interviewees felt that lack of police manpower and equipment contributed to that perception. Interviewees reported that offenders believed that if they were arrested and convicted of a violent act, they were likely to receive a jail or prison sentence; however, offenders reportedly believed that sentences had become less severe over the previous 10 years because of overcrowding and the use of "good time." In sum, interviewees in New Orleans believed that offenders were not deterred by the severity, celerity, or certainty of arrest and imprisonment.

New Orleans provided a good example of the challenges encountered in attempting to apply punishment to violent offenders and one criminal justice system's responses to those challenges. According to the interviewees in New Orleans, sentencing policies and practices had been tailored to respond to an ongoing drug crisis. Courts increasingly relied on more severe sanctions for drug and violent offenses. Convictions that had previously resulted in probation carried prison sentences. Homicide and violent crime cases involving drugs and weapons charges were targeted for special prosecution. These cases were vertically prosecuted, and mandatory life sentences with no parole were imposed. Respondents also said that the complexity of violent crime cases had increased along with the numbers. Increasingly, violent crime incidents involved multiple victims and offenders, and juvenile suspects with criminal and violent histories charged as adults. These matters were further com-

pounded by an increase in the number of first-degree murder cases involving semiautomatic handguns. In response, prosecutors offered fewer plea bargains in violent crime cases. Violent offenders were charged with multiple counts, and consecutive sentences were recommended. Murder cases were specifically targeted for special prosecution, and prosecutors did not offer plea bargains and other charge-reduction incentives. Consequently, nearly 80 percent of homicide cases went to trial.

Collectively, these prosecution strategies and legislative changes resulted in more convictions. Interviewees said that these procedural and legal reforms reinforced a perception among defendants that there were no longer incentives to plead guilty, resulting in an unprecedented number of violent crime cases tried by jury and, among those convicted, much longer prison terms.

In response to increasing numbers of violent crime cases, a budget increase and the reallocation of resources were required to hire additional prosecutors. Similarly, greater numbers of violent crime incidents, combined with a manpower shortage within the New Orleans Police Department, resulted in the need to hire additional police officers. Experienced prosecutors and homicide investigators were in demand to prepare cases. Of the cases brought to their attention, respondents said that approximately 75 percent of violent crime cases were accepted for prosecution, but whether or not this prosecution rate changed during the years of the study could not be ascertained. Among the primary reasons for refusal was a lack of sufficient evidence. Partnerships between prosecutors and police in New Orleans resulted in the establishment of a “charge conference” and homicide court. Other combined efforts and innovations included task forces involving Federal prosecutors and area law enforcement agencies. The district attorney’s office (for Orleans Parish) felt that the unequivocal repeal of “good time” legislation was essential to the prevention of violence because good-time provisions undermined the penal process by permitting one-third of sentences to be served behind bars and the remainder to be served on parole. In addition, the district attorney’s office advocated changes to empower an overburdened probation and parole system, including

increased personnel for intensive supervision, supplemental arrest powers, and additional grounds for revocation of parole.

Support for the notion that decreasing clearance rates may have contributed to increasing homicide rates does not speak to—and certainly does not eliminate—the possibility that increases in homicide led to decreases in clearance rates. In fact, many interviewees reported just such a relationship. Since the focus of this study was on factors affecting homicide (and not those affecting clearance rates), the project team did not pursue this converse relationship. It is possible that both relationships were in effect, possibly acting symbiotically or iteratively: increases in homicide may have led to decreases in clearance rates, which (through greater perpetrator audacity) may have led to increases in homicide, and so on.

Clearance Rates and Victim/Offender Relationship

Many interviewees maintained that the decrease in clearance rates was caused not only by an increase in homicides, but, in particular, by an increase in homicides between strangers, which are often harder to solve than when the victim and offender know each other. Whether homicides involving strangers had, in fact, increased and, if so, whether the increase was related to changes in clearance rate were examined.

When victim/offender relationship was discussed in Chapter 3, the focus was on intimate/family homicides. In the present context, the number of homicides labeled as between strangers did not change drastically in most of the study cities between 1985 and 1994 (see figures 4–12 and 4–13). What did change, however, was the number of homicides for which the victim/offender relationship was labeled as unknown. Richmond, Washington, D.C., and Atlanta experienced the largest increases in homicides as well as the largest increases in homicide for which the victim/offender relationship was unknown (see table 6–3). These cities showed a statistically significant positive correlation between homicide victim count and percentage of cases with unknown victim/offender relationship.

While not totally conclusive, this pattern aligned well with the proposition that increases in homicides led to

decreased clearance rates. It cannot be said with certainty that homicides involving strangers were necessarily to blame for decreased clearance rates—because no arrests were made, the victim/offender relationship remained unknown.⁹ The observed increase in homicides could have been in any type(s) of homicide, and this increase could have caused or contributed to the decrease in clearance rates. However, interviewees attributed the decrease primarily to homicides between strangers, and there is no evidence to dispute this belief. Moreover, to the extent that observed increases in homicide were a function of increased drug-related violence—as posited in chapter 4—this increase would have occurred primarily among strangers.

Table 6–3. Correlation Between Homicide Count and Percentage of Homicides for Which Victim/Offender Relationship Is Unknown

City	Spearman’s Rho
All eight cities	0.465*
Atlanta	0.623**
Washington, D.C.	0.628**
Detroit	0.284
Tampa	0.440
New Orleans	0.309
Richmond	0.586*
Indianapolis	0.143
Miami	-0.007

* $p < 0.05$, ** $p < 0.01$ one-tailed

Notes

1. Sellin, Johan Thorsten, *The Death Penalty*, Philadelphia, Pennsylvania: Executive Office, American Law Institute, 1959.

2. Fattah, Ezzat A., “A Study of the Deterrent Effect of Capital Punishment with Special Reference to the Canadian Situation,” Report 2, Canada: Department of the Solicitor General, Research Centre, 1972; Cardarelli, Albert P., “An Analysis of Police Killed

by Criminal Action: 1961–1963,” *The Journal of Criminal Law and Criminology* 59(3)(September 1968):447–453; and Sellin, Thorsten, *Capital Punishment*, ed. Thorsten Sellin, New York, New York: Harper & Row, 1967.

3. Ehrlich, I., “Deterrence: Evidence and Inference,” *Yale Law Journal* 85(2) (December 1975):209–227; and Yunker, J.A., “Testing the Deterrence Effect of Capital Punishment: A Reduced Form Approach,” *Criminology* 19 (4)(February 1982):626–649.

4. Sparrow, Malcolm K., Mark H. Moore, and David M. Kennedy, *Beyond 911: A New Era for Policing*, New York, New York: Basic Books, Inc., 1990.

5. Kaye Marz, Inter-university Consortium for Political and Social Research, and Seth Flanders, National Institute of Justice, were instrumental in operationalizing these data.

6. Unfortunately, data are missing for Atlanta (Fulton County), 1985 and 1986; Washington, D.C., 1990, 1992, and 1993; Tampa (Hillsborough County) and Miami (Dade County), 1986, 1987, 1990, 1991, and 1992; New Orleans, all years except 1991 and 1993; and Indianapolis, all years. Only for Richmond and Detroit (Wayne County) are data complete. This analysis will be pursued as more complete data become available.

7. The project team recognized that such risk assessment may not occur in many homicides—particularly those committed “in the heat of the moment.” They did not expect the hypothesis in question to apply to such homicides.

8. It is also possible that some other factor(s) may be affecting both homicide clearance rates and homicide rates, with no causal relationship between the two. The researchers believed that this scenario was less likely in this study than it might be in other areas of inquiry because homicide clearance rates and homicide perpetration are so closely related.

9. See Maxfield, M.G., “Circumstances in Supplementary Homicide Reports: Variety and Validity,” *Criminology* 27(4)(November 1989):671–695, for a discussion of the methodological issues surrounding the use of Supplemental Homicide Reports data, including the relationship of “stranger” and “unknown” homicides.

Conclusions and Future Work

This research systematically examined a variety of factors that have been anecdotally or theoretically linked to violence and homicide. Environmental, situational, and response factors were investigated in eight cities that experienced dramatically different homicide trends over the 1985–1994 period. These eight cities, with a total population of about 4 million people, experienced about 8 percent of the Nation’s homicides over the study period.

The analyses revealed some trends that cut across all cities regardless of the underlying homicide trend. Most striking of these patterns was the increasing rate of homicide victimization among young males, particularly young black males. Guns played an increasing role in homicide deaths—representing an increasing proportion of all homicides, regardless of whether the number of homicides in a city was increasing or decreasing. The research suggested relationships between certain factors under investigation and homicide rates. Crack cocaine use and homicide victimization rates were strongly correlated both by interviews and by an analysis of extant drug-use data. However, strong patterns did not emerge in many areas—for example, respondents linked availability and quality of emergency medical services (EMS) to reductions in death rates, but it was difficult to confirm these opinions with available data. Some of these areas of inquiry were identified as promising for future research; these are discussed at the end of the chapter.

The study showed that the nature of homicide differs across cities, suggesting a need for community re-

sponses that are local and based on data that reflect specific local trends. The researchers were surprised by the frequency with which practitioners, community members, and policymakers strongly believed that certain factors were driving homicide rates. These perceptions, however, often were not supported by data that reflected local trends. Rather, perceptions appeared to be formed from national data that often differed substantially from local trends. Although communities appeared to have partial data on local factors that influenced homicide trends, additional data would likely substantially improve their understanding of changes in homicide patterns and their ability to formulate appropriate responses.

Table 2–1 summarized the structural hypotheses investigated by this research. The following highlights conclusions for each of these areas of investigation:

Macro domain

- ◆ Demographic patterns
- ◆ Economic conditions
- ◆ Social services system responses

Micro domain

- ◆ Drug use and drug markets
- ◆ Gun availability and lethality
- ◆ Gang activity

Criminal justice response domain

- ◆ Policing
- ◆ Multijurisdictional task forces
- ◆ Punishment and incapacitation

Demographic Patterns and Homicide

There was considerable consistency in the demographics of those killed across sites, but there was also variation among sites. In most of the study sites, even those with majority white populations, homicide trends were driven by changes in the number and rate of homicide for black males.

To the extent that similar demographic trends existed across cities, these trends could not explain the differences in homicide rates that were observed over the study period. Patterns consistent across cities included the following:

- ◆ The number of victims between 13 and 24 years of age was greater in 1994 than in 1985, although the total population in this age group was smaller in 1994 than in 1985.
- ◆ There were fewer female victims in 1994 than in 1985 (see figure 3–2).
- ◆ More than half of all victims were black. The fraction of black victims increased over the study period (see figure 3–3).
- ◆ Victimization rates were substantially higher for 18- to 24-year-old black males than for any other demographic group.
- ◆ Victimization rates for 18- to 24-year-old males increased in all cities for both blacks and whites (see figures 3–8 and 3–9).
- ◆ Black males 18 and older were substantially overrepresented among homicide victims in comparison with their representation in the population (see figure 3–12).
- ◆ Victimization rates for black and white youths 13 to 17 years of age differed substantially, with negligible rates for white youths in most cities.
- ◆ Victimization rates for black females were much higher than those for white females in all age groups.
- ◆ Victimization rates for black females 18 to 24 years old were comparable with those for white males 18 to 24 years old, except in Detroit.

- ◆ Those arrested for homicide were likely to be black males, although information was missing for a large number of cases (see figure 3–13).
- ◆ Victims were likely to be killed by someone from the same race and age group—at least as indicated by information available on those arrested for homicide—although the average offender was often younger than the average victim (see tables 3–2 through 3–4).
- ◆ Murders of black males by black males often dominated local statistics—outnumbering all other murder combinations combined—even in cities where black males made up a relatively small percentage of the population (see table 3–4).

There was also considerable variation among the cities; for example:

- ◆ The fraction of all homicides with female victims varied substantially among the eight cities—in 1994, women were victims in 10 percent of homicide cases in Washington, D.C., (see table 3–1) compared with 30 percent in Tampa (see figure 3–2 and table 3–1).
- ◆ The victimization rates for white males and females in Detroit were substantially higher than those in the other seven cities. These rates increased dramatically over the study period, although Detroit’s overall homicide rate declined. Detroit experienced a substantial decline in the white population that was not accompanied by a similar decline in the numbers of homicides, leading to the higher rates.
- ◆ Although homicide victimization rates for black males—especially 18- to 24-year-olds—were consistently and substantially higher than for other groups, the rates differed among the cities. During some years, the rates in Washington, D.C., New Orleans, and Richmond were more than twice the rates experienced in other cities.
- ◆ Homicide arrest rates for white males were generally much lower than those for black males. Detroit’s arrest rates for white males in

the 18- to 24-year-old age group were substantially higher—reaching more than 300 per 100,000—than those in other cities—30 to 50 per 100,000 (see figure 3–15).

- ◆ Homicide arrest rates for black males 18 to 24 years old increased in all the study cities except Tampa and Miami (see figure 3–14).
- ◆ Detroit was the only city that consistently had homicide arrest rates for white females larger than zero; these rates were higher for all age groups (see figure 3–17).
- ◆ The proportion of homicides classified as occurring under certain circumstances (e.g., related to a felony, drug involved) differed substantially across cities and over time. In Washington, D.C., a substantial increase in the number of homicides was attributable to an increase in homicides that were committed during robberies or other felonies (see figure 3–18).¹

Economic Conditions and Homicide

Interviewees reported that changes in economic conditions varied substantially across cities. Respondents also varied considerably in their assessments of the influence of economic factors on homicide. In Tampa, the belief that positive economic change was accompanied by decreases in violence and homicide appears to have been supported by reports on improved economic conditions and reduced homicide rates. In New Orleans, in contrast, reports of economic trends and the homicide rate appear unrelated. Overall, there was no consensus among respondents on the relationship between economic factors and homicide.

Subsequently, the researchers compared economic indicator data from the U.S. census with homicide data. These comparisons were limited in two ways. First, the census data provided only two data points—1980 and 1990. Second, the data treated the city as the unit of analysis and, thus, were not sensitive to within-city variation in such measures as, for example, poverty or employment (see chapter 4, appen-

dix 4–A). Findings based on these limited data suggested the following:

- ◆ There was evidence of a potential relationship between poverty and homicide. In the three cities that showed increasing homicide rate trends (New Orleans, Richmond, and Indianapolis), the percentage of black residents with incomes below the poverty level increased between 1980 and 1990. In the two cities with decreasing quadratic trends (Washington, D.C., and Atlanta), the percentage of residents living in poverty fell between 1980 and 1990. Although homicide rates dropped over the study period in Detroit and Tampa, there was no change in the percentage of residents living below the poverty line in Tampa, and there was an increase in those living in poverty in Detroit.
- ◆ There was some evidence supporting a link between the level of employment and homicide trends. In New Orleans and Richmond, the percentage of those employed declined while homicide increased. In Tampa, employment was up while homicide declined.
- ◆ No relationship was found between the distribution of income across a city's households (concentration of wealth) and homicide. For seven of the eight cities, income distribution was more unequal in 1990 than in 1980. Similarly, there appeared to be little relationship between the level of distributional inequality and homicide rates.
- ◆ Education and household type did not appear to be related at the city level of analysis to homicide trends. Seven of the eight cities showed increases in the percentage of adults over age 25 who had graduated from high school (only Miami showed a decrease). The percentage of households headed by married couples decreased in all cities.

Services and Homicide

Social and public services system responses to violence were perceived to affect homicide rates, although in some cases respondents suggested that

improved services were unable to overcome a tide of violence. The study examined emergency medical services, domestic violence programs, and public housing. Specific findings included the following:

- ◆ Anecdotal evidence from respondents in some cities suggested that improved emergency medical services had reduced homicide rates by reducing the number of fatalities among gunfire victims. All cities reported improvements in EMS systems; however, efforts to link the timing of EMS improvements with changes in homicide rates were unsuccessful.
- ◆ All EMS directors reported increased burdens because of the increased use and power of guns. In one city, the number of gunshot wounds per victim increased in 5 years from 1.1 to 2.4. In another city, the coroner said that he could not remember the last time a homicide shooting victim had been shot only once. Thus, EMS improvements may have dampened an increase in gun homicides that would otherwise have been seen. Additional data from other sources (e.g., trauma registries) are needed to explore this issue further.
- ◆ Homicides in which victims and offenders were related made up a relatively small portion of all homicides but a large portion of homicides in which females were victims. In seven of the eight cities (all except Detroit), these homicides were roughly 50 percent of all female homicides for which the relationship between victim and offender was known.
- ◆ A decline in family/intimate homicides contributed to the overall decline in homicides in cities that had declining trends. In Detroit, Atlanta, and Tampa, a disproportionately large part of the decrease in homicides could be attributed to decreases in intimate/family homicides. Particularly in Tampa, which has a large number of services available for domestic violence victims, it is reasonable to expect that these shelter programs may have played a part, although police response and other factors may have also contributed.

- ◆ Many respondents suggested that a disproportionate share of violence and homicide occurred in and around public housing. Most of the steps taken by public housing agencies, security personnel, and police in response to violence occurred near the end of or after the study's timeframe, so they could not explain homicide trends during the period of interest. (See below for more on public housing policing.)

Drugs, Guns, Gangs, and Homicide

Respondents in all cities suggested strong links between drugs, guns, gangs, and homicide. Emergency ambulance crews, police officers, prosecutors, youth activities coordinators, and others expressed strong beliefs about the link between these factors. Across cities, guns and drugs were perceived as serious problems regardless of the level of or trend in homicide. Concern was higher about guns and drugs than about gangs, but none of the cities was strongly identified with gang activity.

Drugs. Supplementary data analyses confirmed links between certain categories of drug use and homicide trends. Specific findings included the following:

- ◆ Crack cocaine was the only drug uniformly associated with community violence and homicide. Both interviews and data analyses pointed to crack as a serious source of violence. In five of the six cities for which Drug Use Forecasting (DUF) data were available, homicide rates tracked closely with cocaine-use levels among adult male arrestees (see figure 5–1).² The relationship between homicide rates and arrestee cocaine use was strongest in the 18 to 24 and 25 and older age brackets (see figure 5–2).
- ◆ Marijuana markets were cited as emerging sources of violence in Washington, D.C., and Richmond, but use rates, as measured by DUF, were not directly related to homicide trends.
- ◆ No links between homicide rates and trends and heroin, PCP, or methamphetamines were uncovered. These drugs were relatively minor problems in most of the study cities.

- ◆ Numerous respondents reported a link between substance abuse and domestic violence. Although crack was frequently mentioned, alcohol, powder cocaine, marijuana, and other substances were also cited. Few respondents, however, perceived that this link extended to homicide.
- ◆ Crack markets were universally described as highly competitive, street-corner-oriented markets in which most transactions were anonymous. The similar descriptions of these markets in all study cities regardless of homicide trend and level suggest that the competitive market structure may not be a primary cause of drug-related homicides.
- ◆ The general structure of participation in crack markets and the nature, duration, and consequences of the “crack high” may account for the relationship between the cocaine prevalence rates among arrestees and homicide rates. Crack users reported large numbers of “buys,” extensive networks of potential suppliers, and less reliance on a primary supplier (see table 5–7), suggesting that transactions were likely to occur in an opportunistic manner. The high from crack lasts as little as 10 minutes; thus, when the high wears off, the crack user may still be in the market and motivated to buy more of the drug—and to commit a crime to obtain the money to do so.
- ◆ The relationship between cocaine use among arrestees and homicide trends suggests a need for caution and intervention in cities where the use of crack among juveniles is increasing.
- ◆ Communities with declining homicide rates ranked drugs as highly a problem as did communities with increasing and stable homicide rates.
- ◆ Perceptions about the level and nature of drug use in a community appeared to be formed primarily from arrest and crime data, media reports, and general national trends. In many cases, these perceptions regarding local drug

trends differed substantially from drug trends as measured by DUF and from the community’s homicide trend.

Guns. Community respondents expressed great concern about guns and firearms. This concern was well placed; guns accounted for more than 80 percent of homicides in five study sites. Specific findings included the following:

- ◆ Gun homicide trends did not explain local homicide trends. The percentage of homicides from guns increased in all study sites, regardless of the underlying homicide trend.
- ◆ Federal guidance in the area of guns was particularly appreciated. Respondents reported struggles to develop comprehensive gun control strategies. One respondent noted that extensive networks have evolved around drugs that include State- and Federal-level coordinators and representatives who have helped implement treatment, prevention, interdiction, and law enforcement programs, block grants, drug courts, and regularized reporting mechanisms. Such networks do not exist for gun violence.
- ◆ Federal efforts against gun violence were reported to address only a small fraction of gun violence in the communities and thus were not viewed as a comprehensive solution to community gun violence.

Gangs. Gangs were not viewed as a particularly significant cause of homicide in the eight study sites. However, the study was not conducted in sites known to have gang problems. One exception to this concern was that respondents perceived significant links between gangs and drugs. When gangs were discussed independently from drugs, however, concern about gangs diminished sharply. Significant variation existed in defining gang membership and gang criteria, and some standardization in this area would facilitate cross-site comparisons. Many of the sites have developed extensive antigang programs and perceived them to be effective, although most have not been formally evaluated.

Policing and Homicide

The study revealed several different views on the relationship of police to homicide in communities. Although some respondents felt that certain policing strategies were effective, others suggested that police only *responded* to homicide and thus were not able to affect the level of homicide in a community. Specific findings included the following:

- ◆ There was anecdotal support for the effectiveness of problem-oriented policing. This support was most evident for programs that targeted public housing and schools.
- ◆ Community-oriented policing was perceived to be promising. However, community-oriented policing was reported by respondents to have only recently been implemented on a limited scale in the study sites. Particularly, there was little indication in any of the cities that the community policing philosophy was being inculcated into homicide investigation units. Thus, community-oriented policing practices, while perhaps significant contributors to current trends, were not perceived to have played a role in affecting homicide in the study sites from 1985 to 1994.
- ◆ Witness protection and cooperation were cited as problems in all cities. Respondents noted a lack of cooperation from witnesses in violent crime cases and insufficient resources to protect them. Respondents also said that few witnesses had been retaliated against and that witnesses' concern for safety and requests for protection seemed to be driven by their perceptions of the danger they could be in if they stepped forward.
- ◆ Programs like D.A.R.E.[®] and the Police Athletic League were considered important community outreach/prevention efforts.
- ◆ Mandatory arrest policies for domestic violence incidents were implemented in four of the eight cities. However, most of these policies were instituted late in the study period and could not be linked to changes in homicide trends.

Task Forces and Homicide

There was strong local support for multijurisdictional task forces and cooperative policing relationships. These working arrangements were viewed as highly effective mechanisms for addressing specific types of criminal activities across jurisdictional boundaries. Federal task force efforts were highly praised. In particular, respondents focused on the following:

- ◆ Task forces contributed special skills and expertise, dedicated resources, and access to Federal prosecution.
- ◆ Most cities reported excellent relations between Federal and local authorities.
- ◆ All cities credited task forces with important arrests and convictions.

Punishment and Homicide

Significant changes in sentencing, probation, and parole practices occurred in all cities during the study period. In most cases, sentencing became more severe and penalties for specific offenses increased. There were mixed findings as to whether these changes in the likelihood and severity of punishment were affecting violence and homicide. Increases in reports of witness intimidation and reduced witness cooperation suggested that offenders might perceive increases in the likelihood and severity of punishment and that they were responding rationally to this perception by intimidating witnesses so as to reduce the likelihood of conviction.

Finally, there is some support for the incapacitation and deterrence arguments. Analysis of net inmate flows into and out of prison suggests that net increases in prison detentions were linked with declines in homicide, while net increases in prison releases were linked with increased homicide rates. The evidence for this hypothesis, however, was based on limited data and will be subjected to additional analysis.

Future Work

A major goal of this project was to identify promising avenues for future inquiry. Several issues appear to warrant continued investigation with the collection and analysis of additional data. Specifically, these topics include:

- ◆ The link(s) between guns, emergency medical services, and death.
- ◆ Violence in public housing and the efficacy of targeted policing activities.
- ◆ Additional, updated examination of community-oriented policing activities and their effect on homicide rates.
- ◆ The link between cocaine prevalence rates and homicide, and possible extrapolations to other drugs.
- ◆ The effect of incarceration levels on violence in cities, focusing on potential incapacitative effects.

- ◆ The spatial and temporal distribution of homicide and its relationship to economic and other factors at the census-tract or neighborhood level.

Notes

1. These data should be interpreted with caution because circumstance is often listed as unknown in the Supplemental Homicide Reports data and, even when a circumstance is listed, it is typically based to some degree on interpretation and conjecture.
2. DUF interview data (self-reports of drug use by arrestees) distinguish crack cocaine from powder cocaine use, but urine tests conducted on arrestees, which have proven more accurate indicators of recent (past 72-hour) drug use, can detect only the presence of cocaine, not the method of ingestion.

