

# 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.<sup>1</sup> 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.

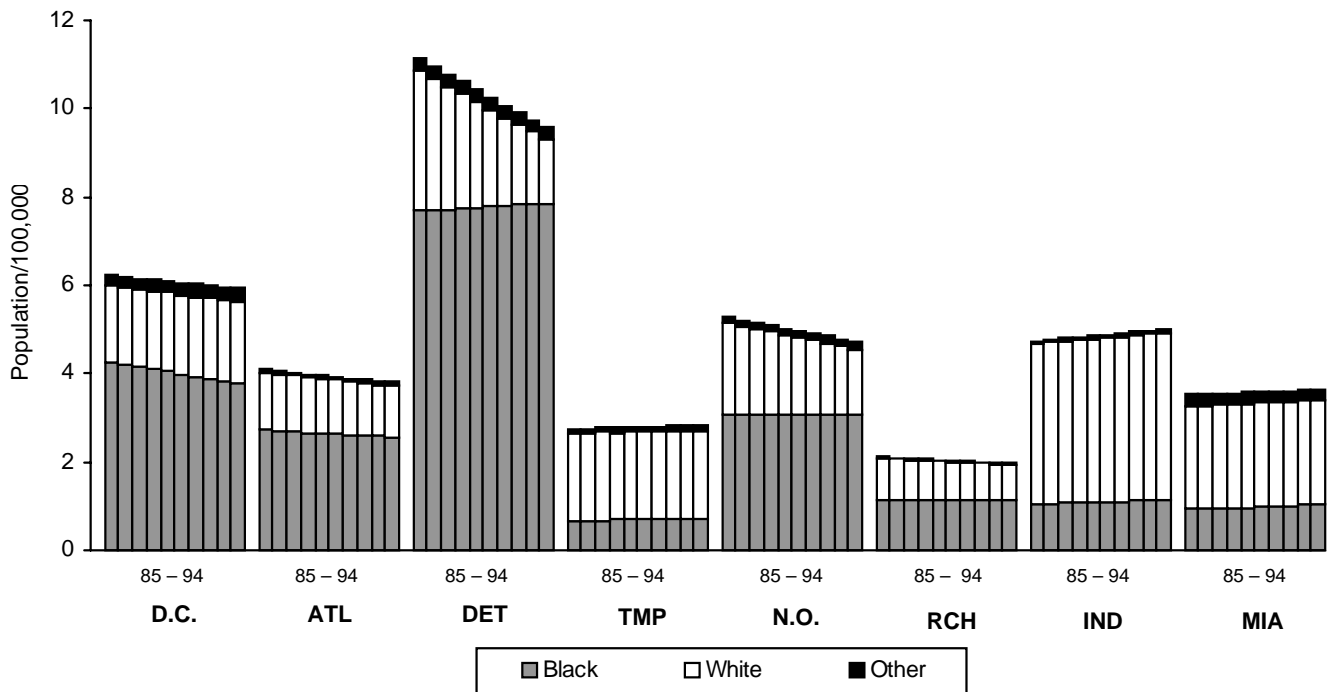
Throughout the timeframe, females were in the slight majority in all eight cities, ranging (in 1994) from 51 percent in Miami to 54 percent in Detroit, New Orleans, and Richmond. The only city in which the female population changed by more than 1 percent was Miami, where it decreased from 53 to 51 percent.

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.<sup>2</sup> 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
<b>Total</b>	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).

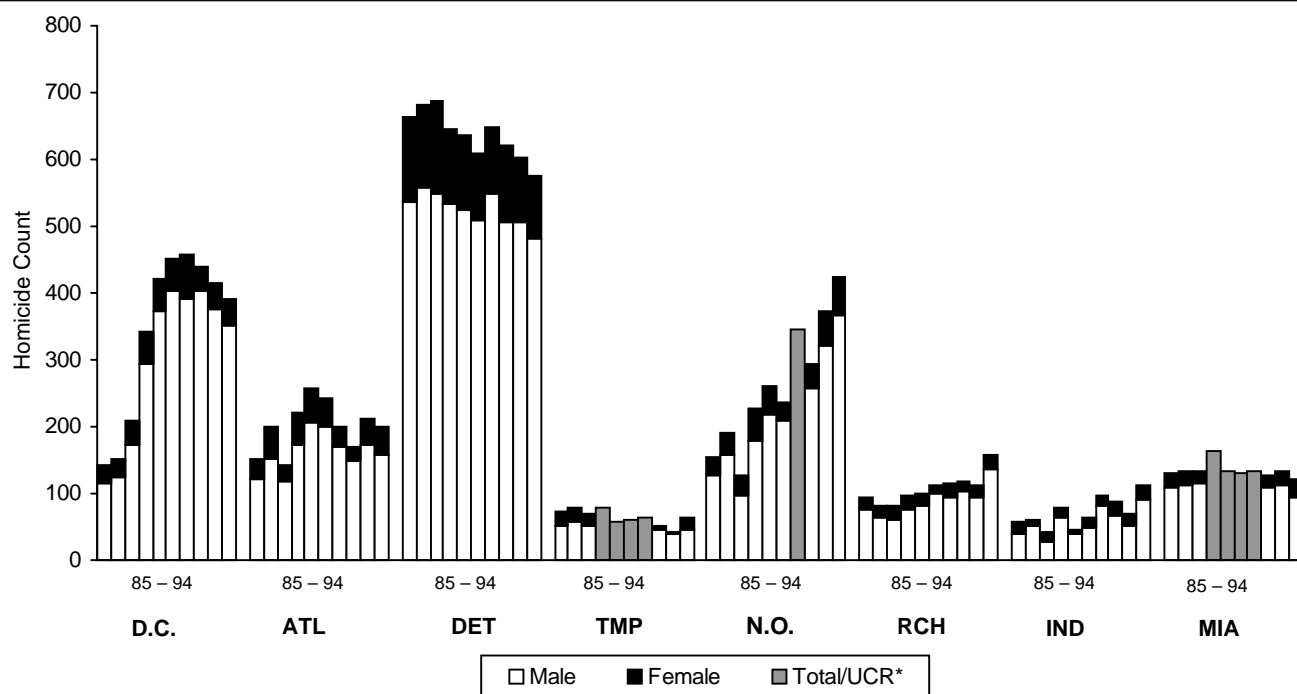
Figure 3–2 shows total homicide counts by city, year, and gender. As would be expected if the changes in homicide counts dominated changes in population, the count patterns roughly approximated the trends in homicide victimization rates that were used to select the cities (see figure 2–6). Thus, the 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).

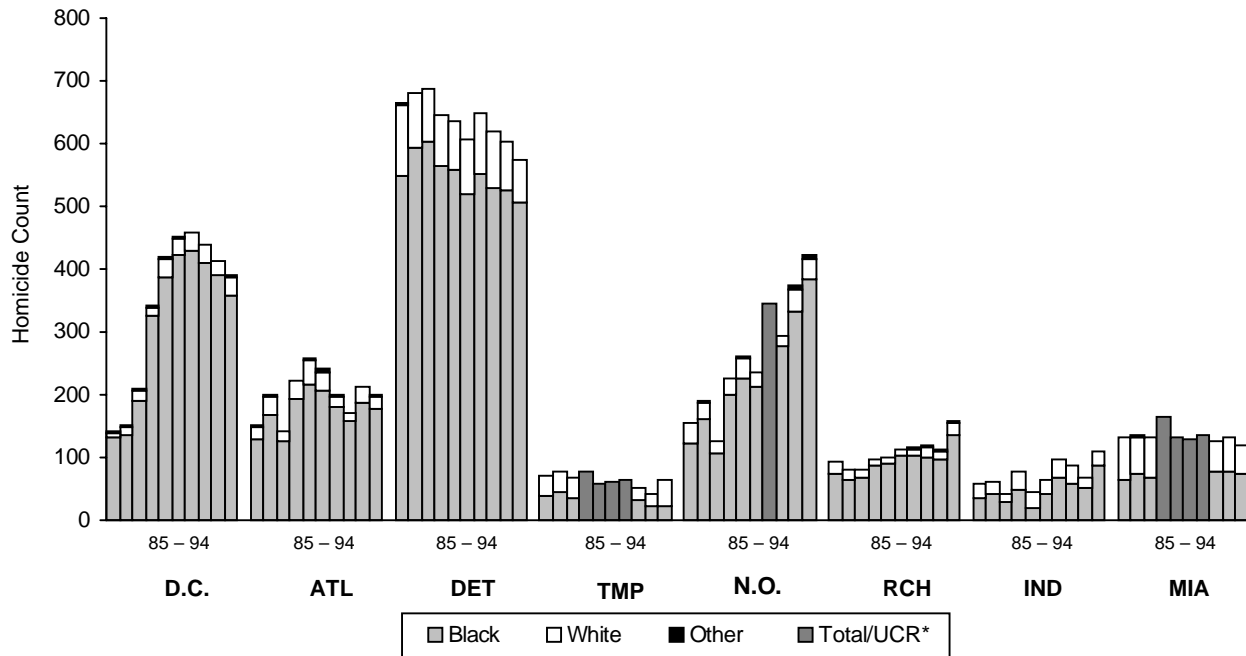
Figure 3–3 presents the racial distribution of the total homicide counts shown in figure 3–2. This figure shows that most victims were black—in Washington, D.C., more than 90 percent of all homicide victims were black throughout the study period. Even in the cities whose populations were 70 percent or 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.

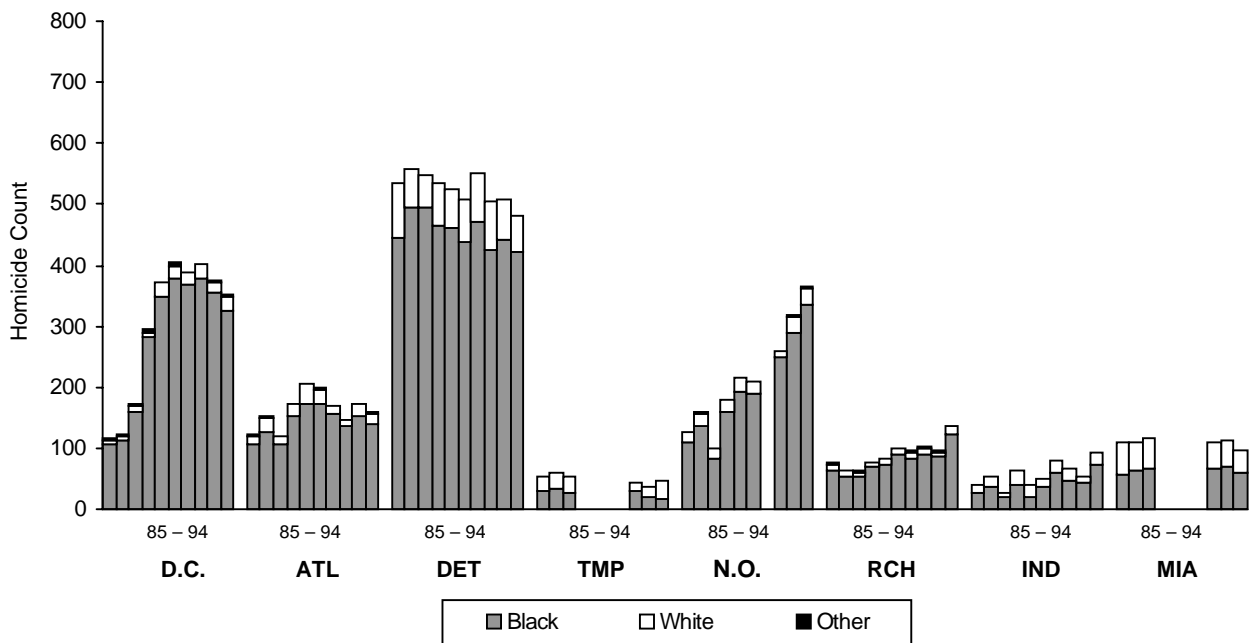
Figure 3–6 shows total homicides by city, year, and age group. Three age classifications are used—17 years old and younger, 18 to 24 years old, and 25 years old and older. The two younger groups contributed disproportionately to the homicide counts in comparison with their representation in the population.

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



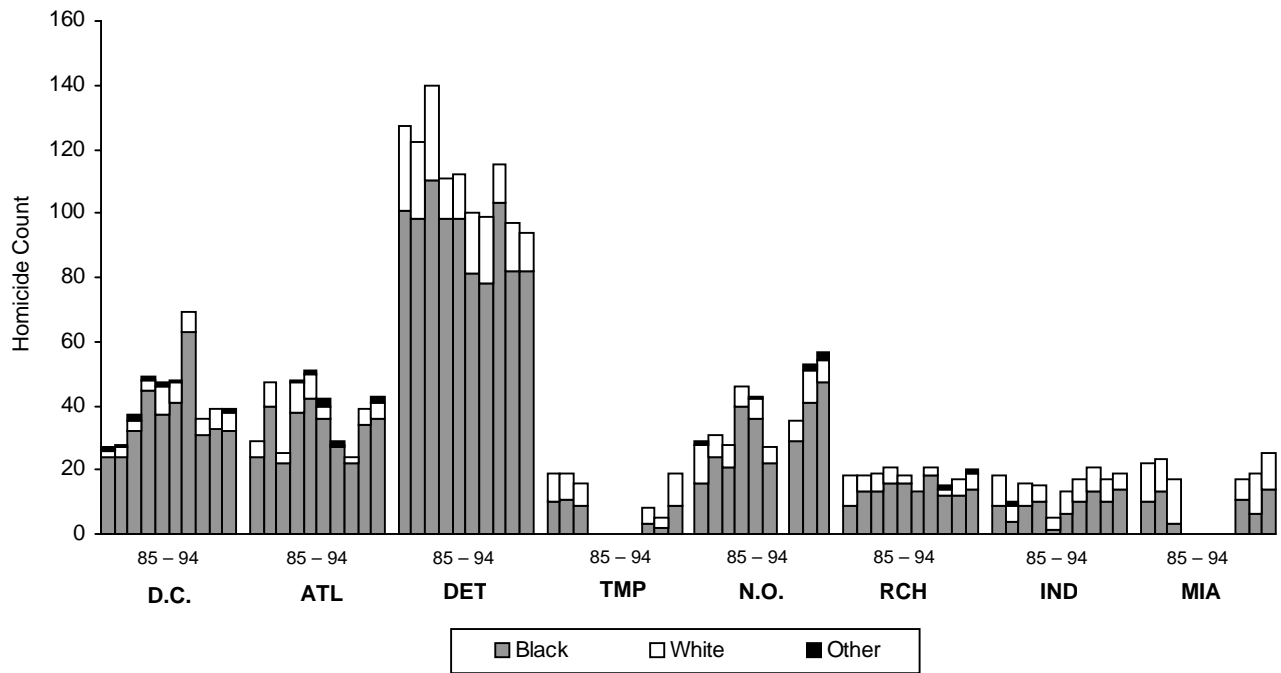
\*SHR data were not available for New Orleans, 1991, and Miami and Tampa, 1988–1991. Shown, when appropriate, are aggregate homicide counts reported to the Uniform Crime Reports Return A.

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



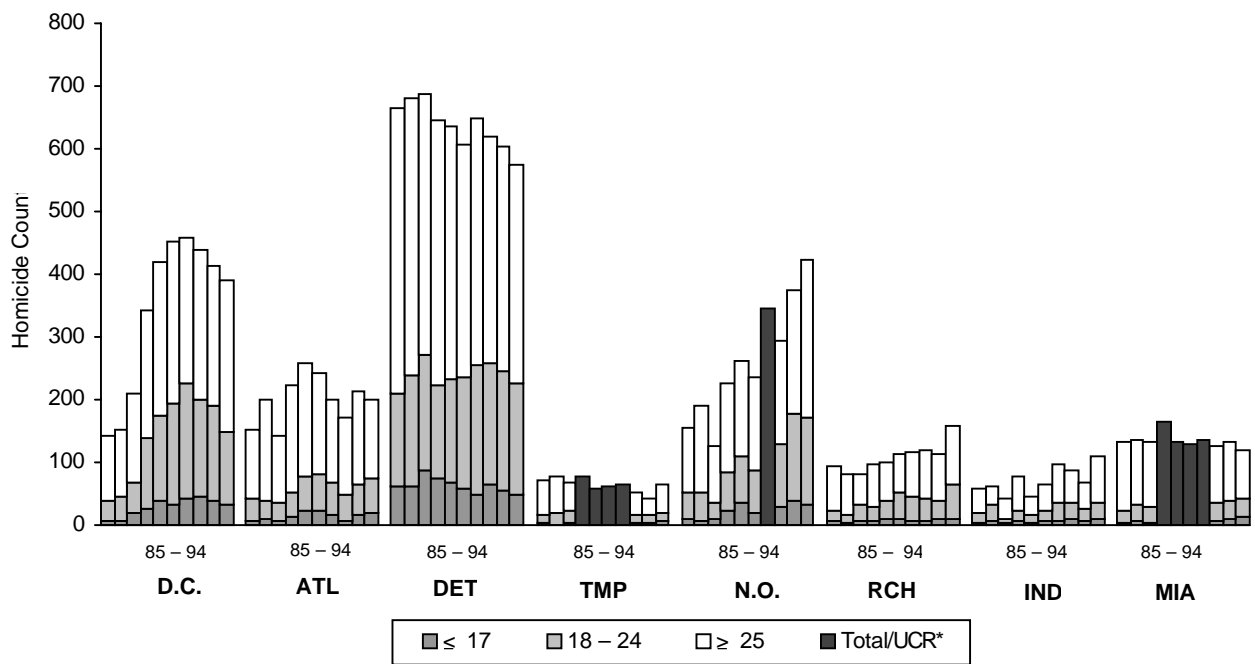
**Note:** Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

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



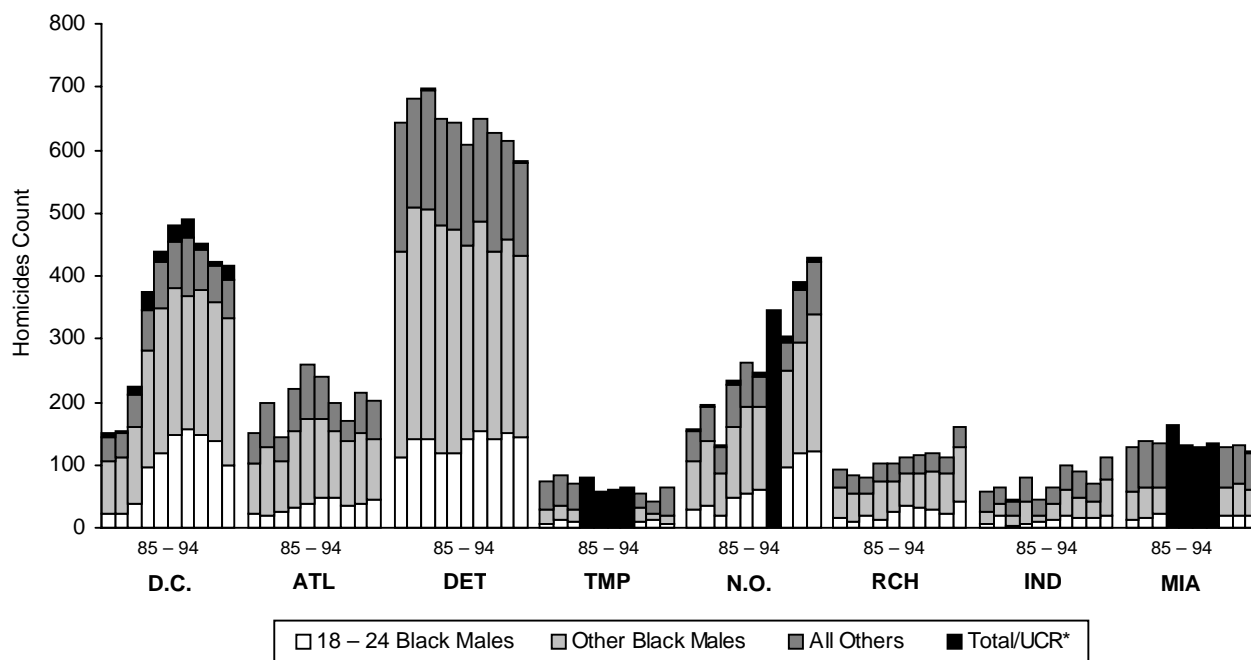
**Note:** The scale used differs from figure 3–4; missing data for New Orleans, 1991, and Miami and Tampa, 1988–1991.

**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).

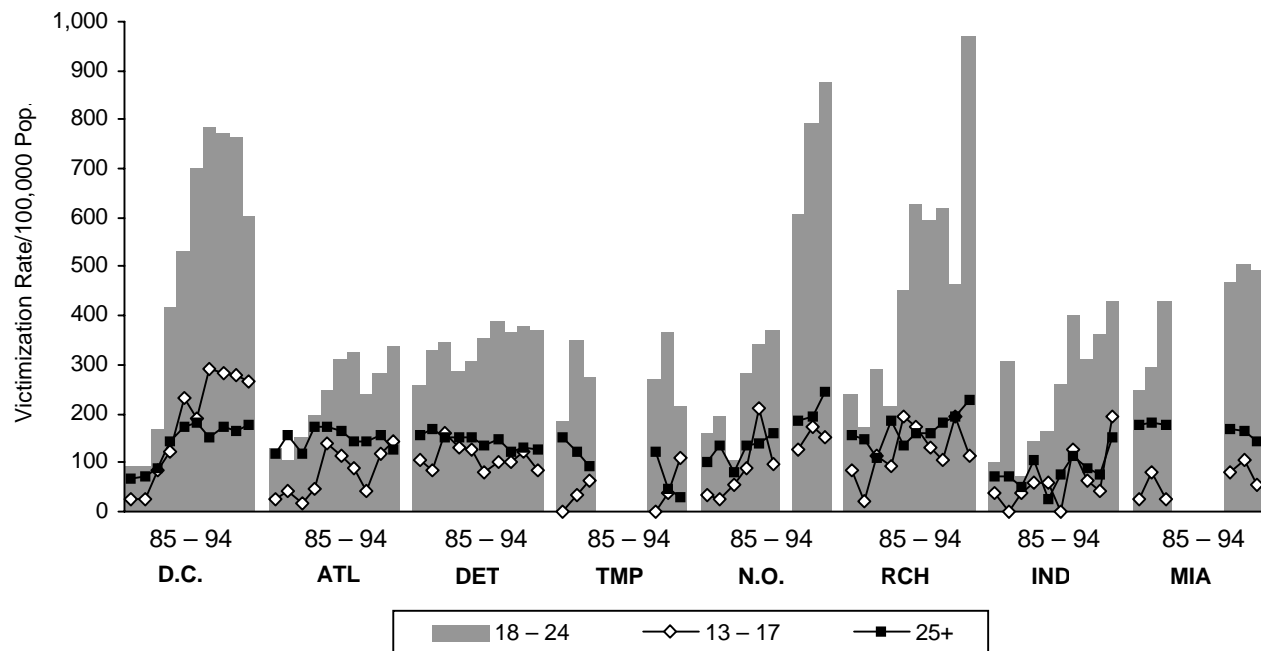
Figure 3–7 shows the significant contributions to homicide victimization counts of one small demographic group—18- to 24-year-old black males. This trend mirrored the overall trend in all cities except Detroit, where homicides among this group remained constant in the face of a declining overall trend.

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



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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 ( $6 \times 0.0069$ ).<sup>3</sup> 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.<sup>4</sup>

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.

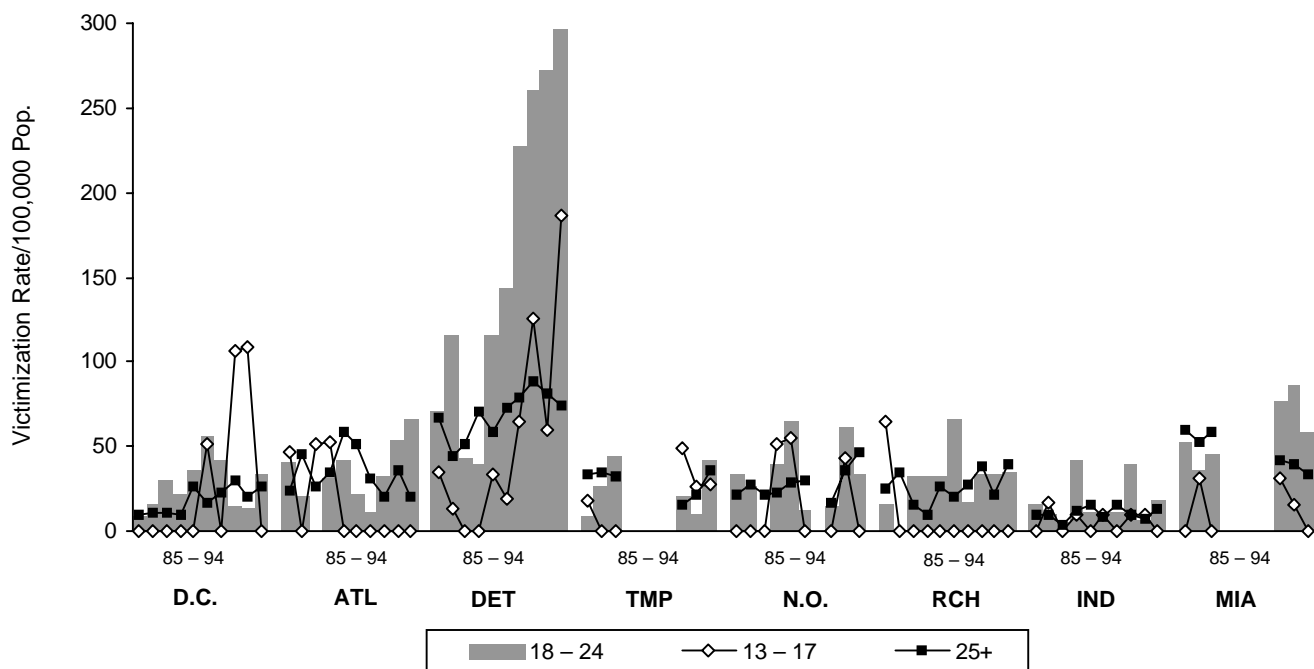
White males ages 18 to 24 experienced increases in homicide victimization rates of more than 100 percent

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.

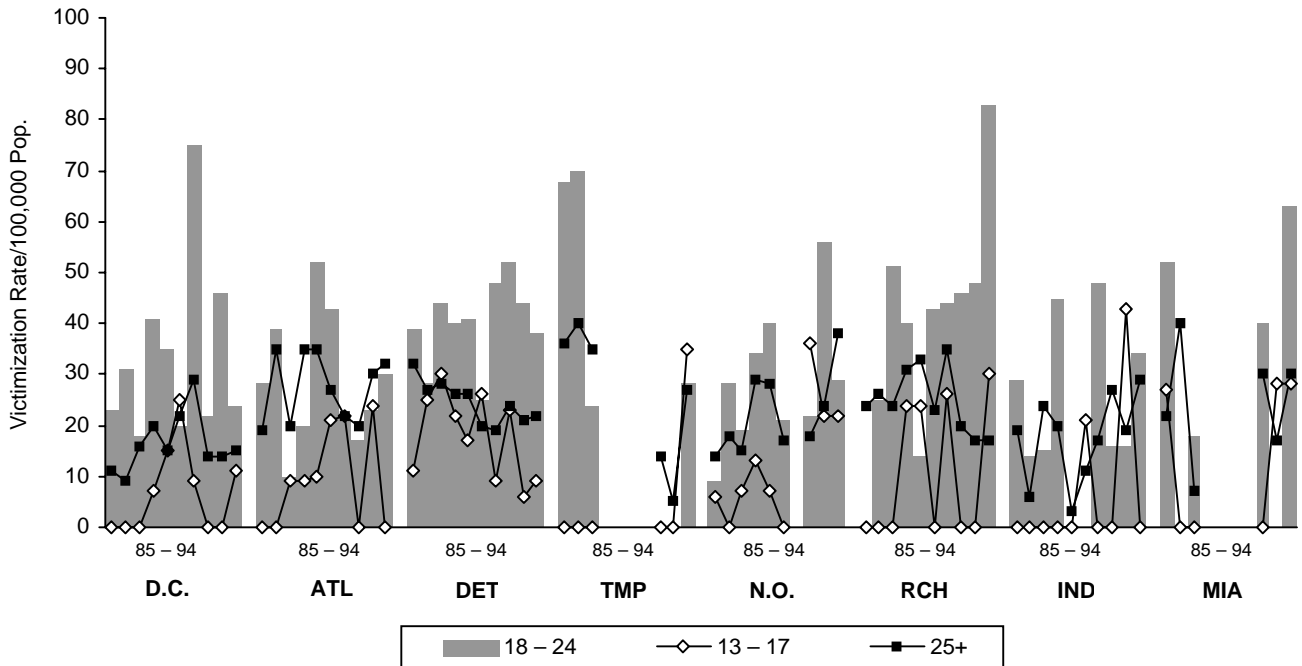
3–8 shows that, by 1994, rates of 100 homicides per 100,000 or higher were observed in most cities for black youths. In contrast, as can be seen in figure 3–9, the modal victimization rate across the 10-year period for white male youths was zero per 100,000, with the exception of Detroit. Further, for 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.

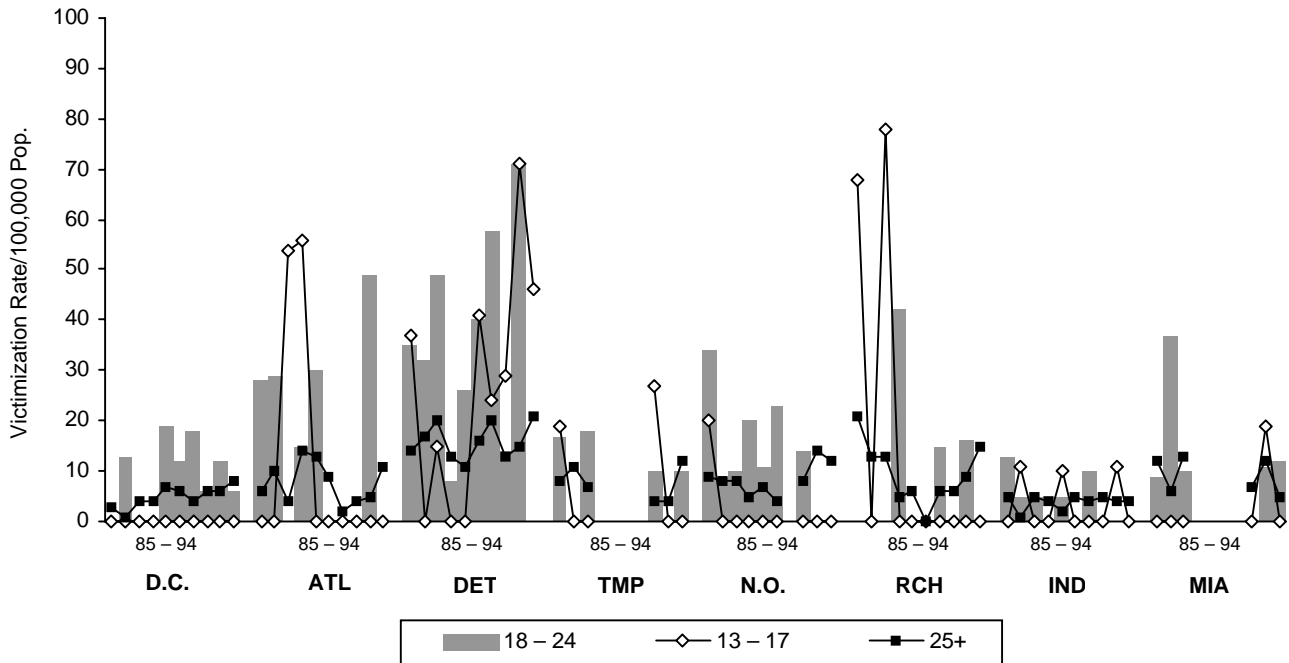
As can be seen by comparing figure 3–10 with figure 3–9, black females ages 18 to 24 suffered homicide

**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

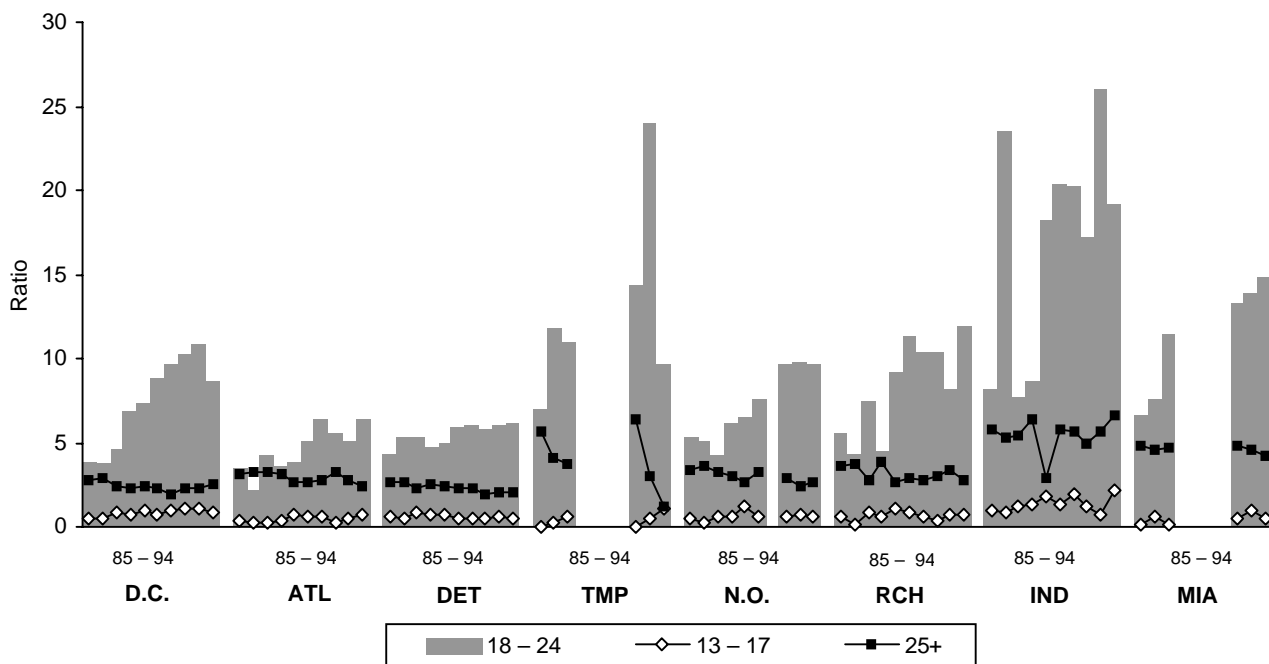
disproportionality ratio for each group equals the proportion of homicides among that group divided by that group's proportion of the overall population. This ratio equals "one" if the fraction of total homicides experienced by the group equals the fraction the group represents in the total population—for 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

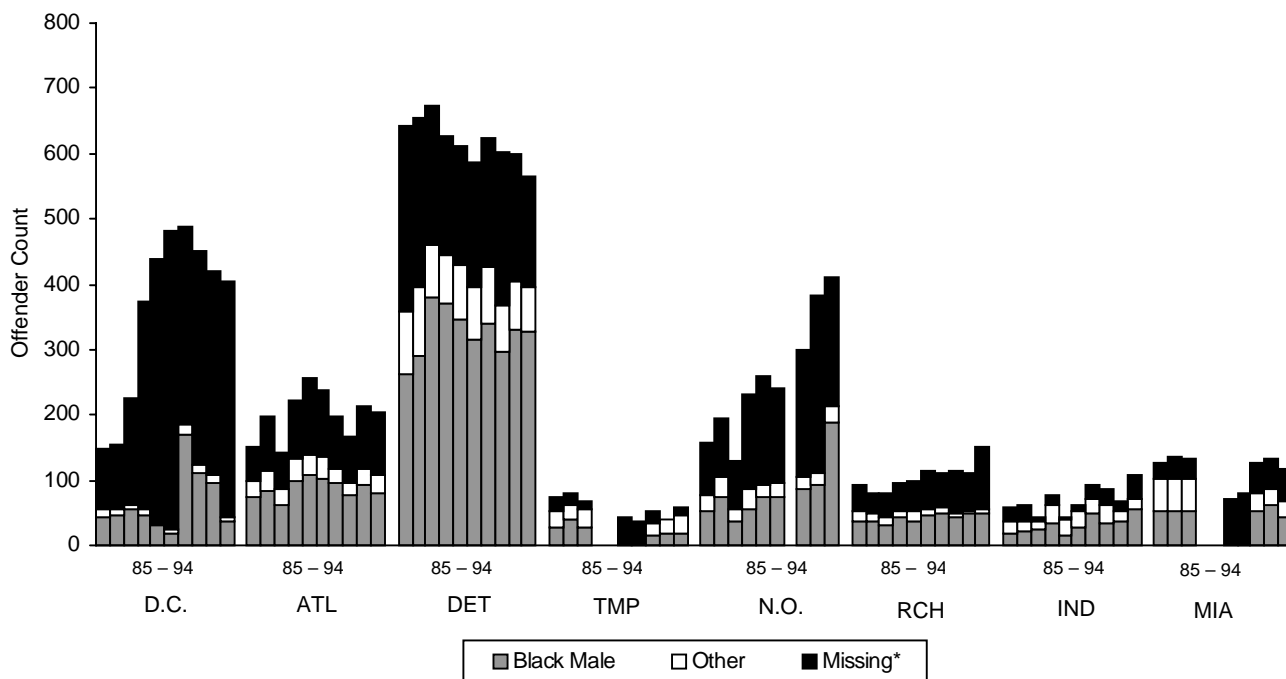
**Figure 3–12. Disproportionate Homicide Victimization of Black Males, 1985–1994\***



\*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.

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## 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.

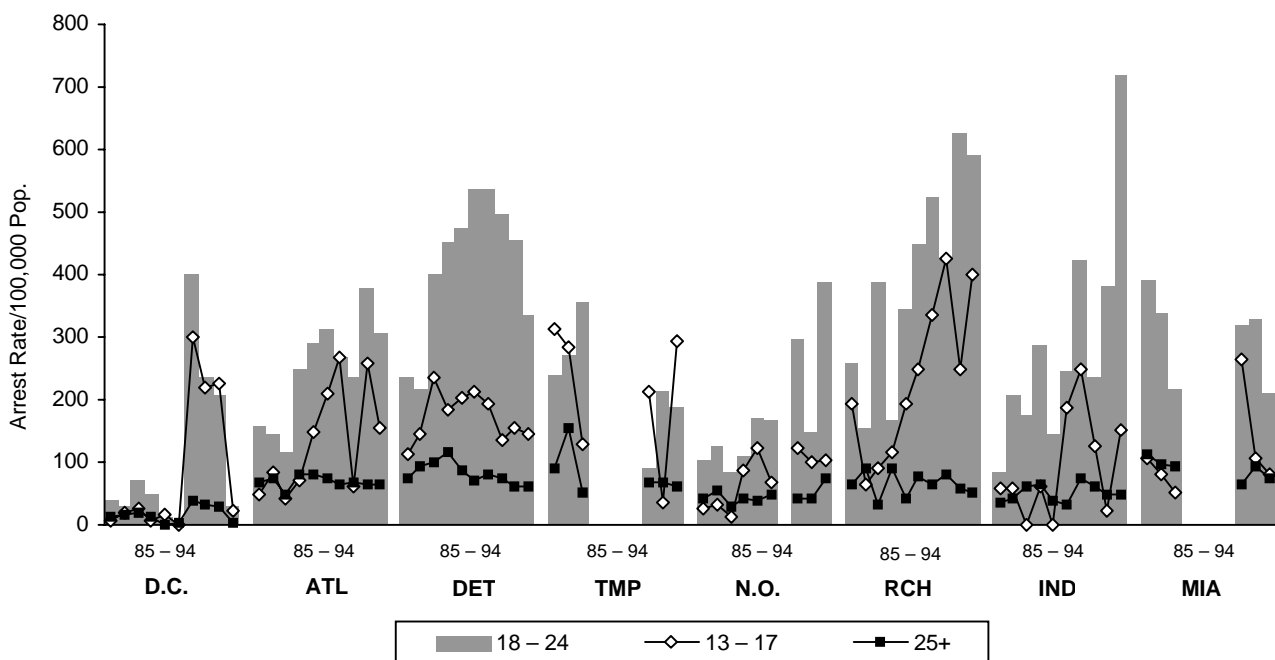
Figures 3–16 and 3–17 present arrest rate information for black and white females, respectively. In many

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

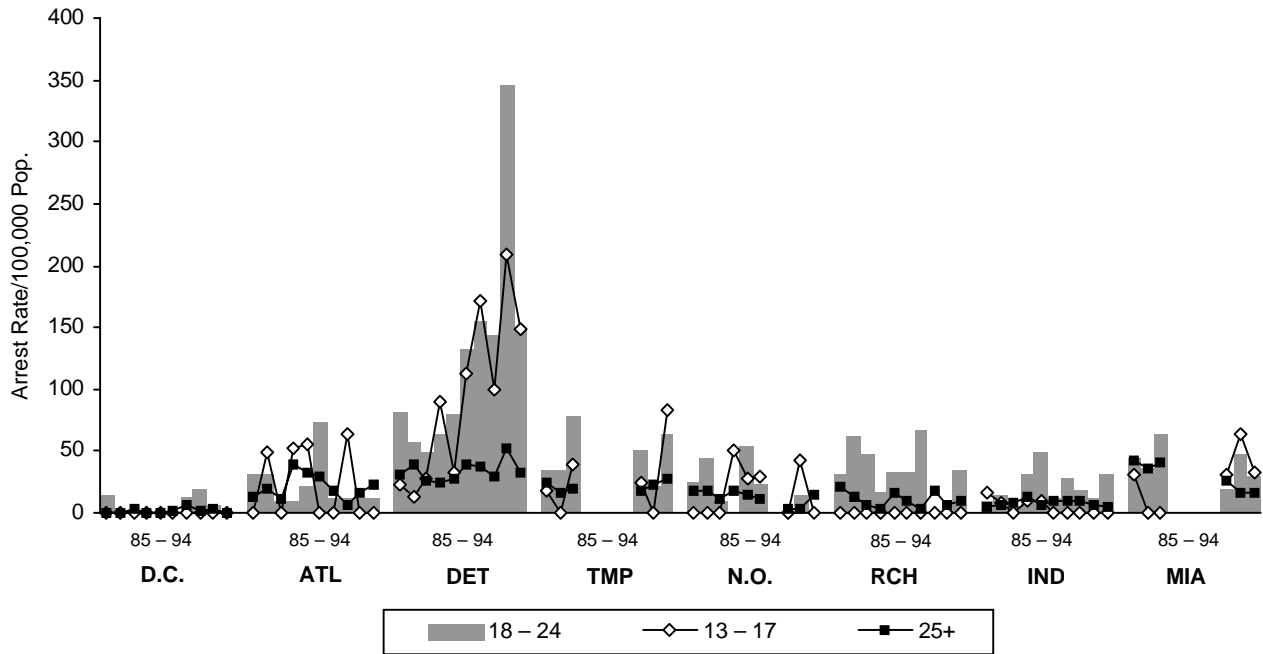
**Figure 3–14. Homicide Arrest Rates for Black Males, by Age, 1985–1994**



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

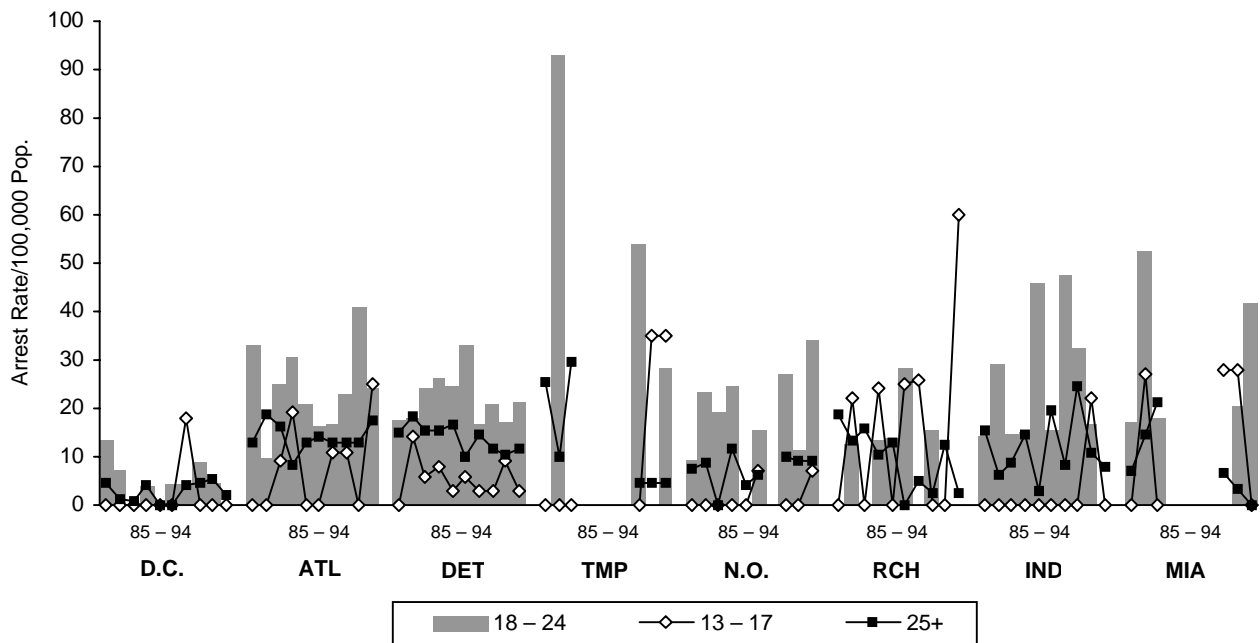


**Figure 3–15. Homicide Arrest Rates for White Males, by Age, 1985–1994**



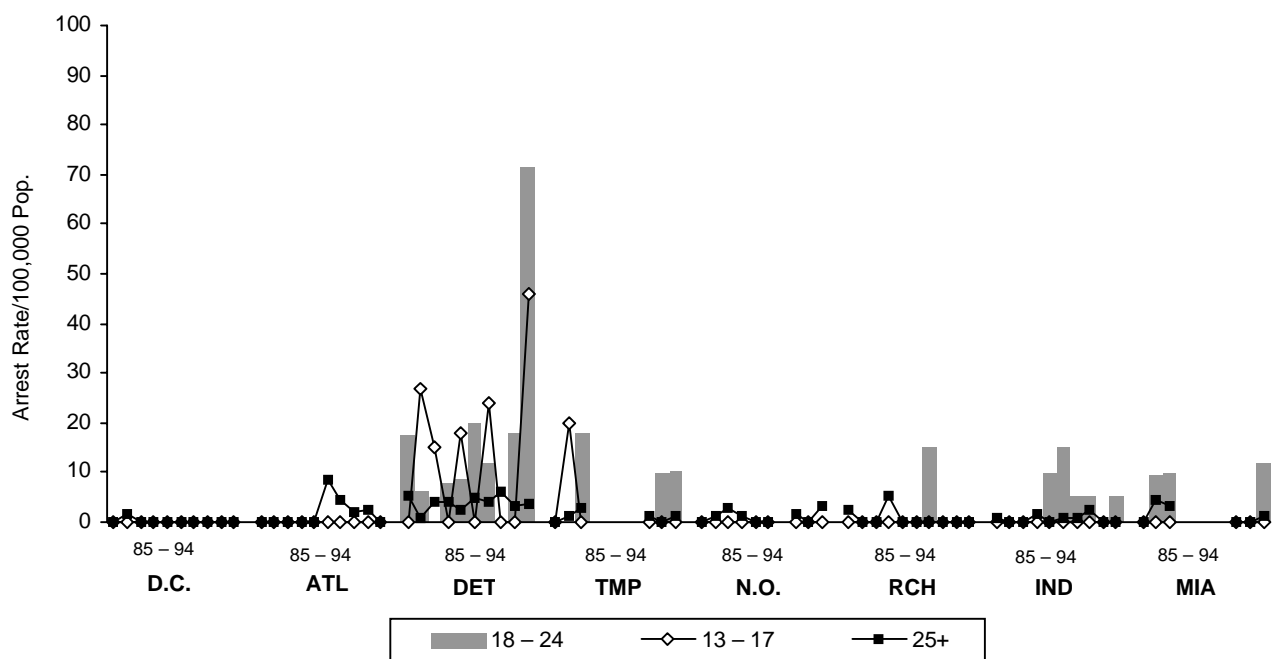
**Note:** Data are missing for New Orleans, 1991, and Miami and Tampa, 1988–1991.

**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 ( $\beta_0$ )			Slope ( $\beta_1$ )			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

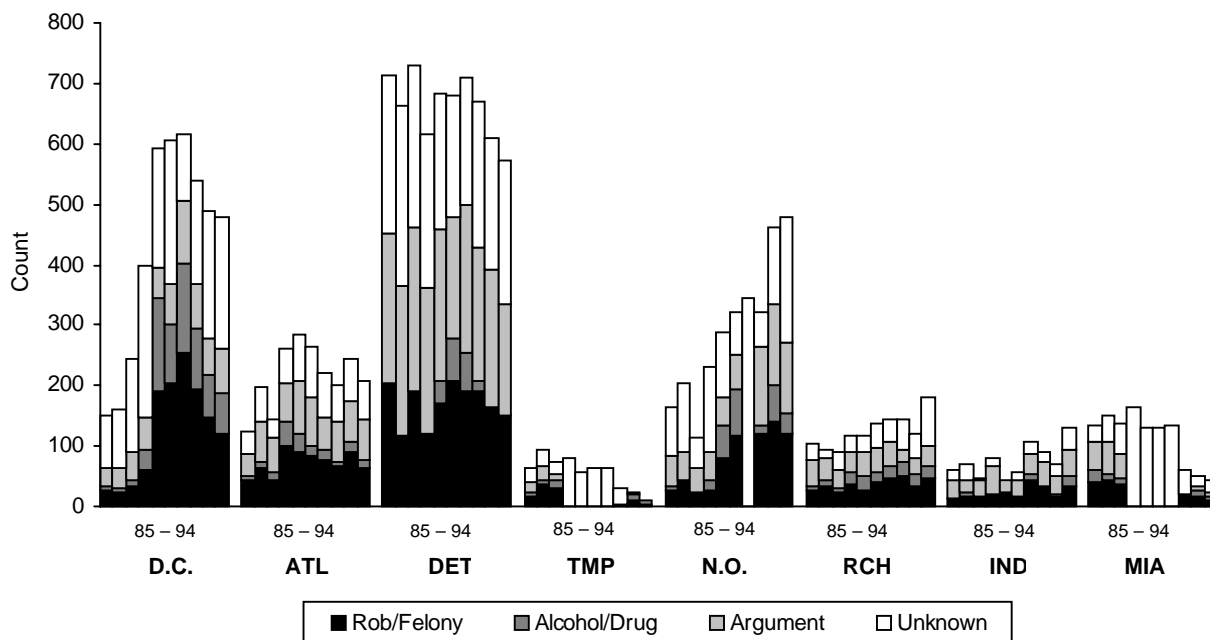
The Supplemental Homicide Reports also provide information on the circumstances of each homicide—whether the homicide was committed in connection with a robbery or felony, was related to alcohol or drugs, was related to gangs, was related to an argument, or was of unknown circumstance. Use of this classification 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.<sup>1</sup>

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.)

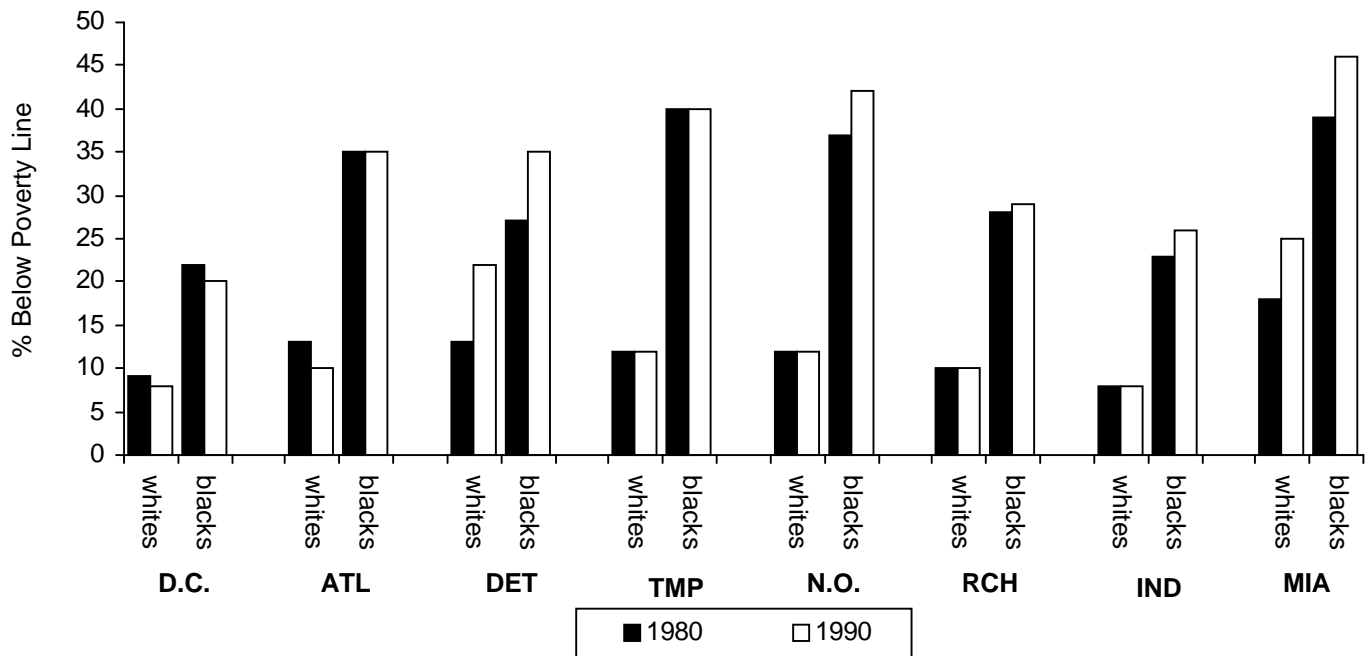
## Poverty

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.<sup>2</sup> (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.

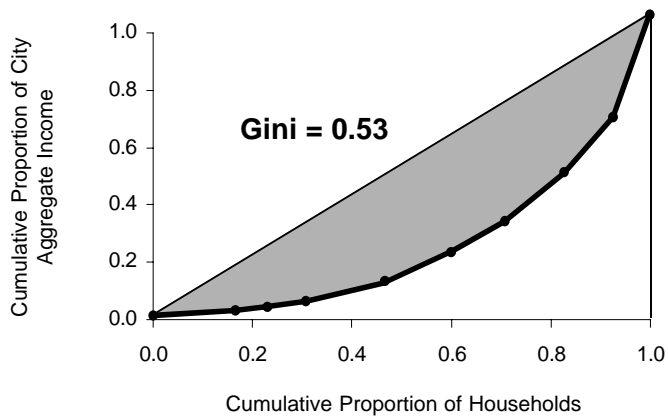
for blacks). However, in the census period ending in 1990, homicides were still increasing in Washington, D.C., and Atlanta. This sidenote highlights one problem with using poverty measures from the census: the latest census (in 1990) was in the middle of the timeframe of interest. This concern may be 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.<sup>3</sup> 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

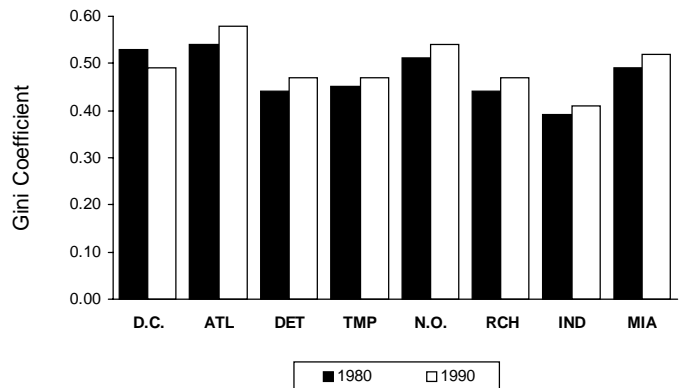
estimates. The team then calculated a Gini coefficient for each city to summarize the income distributions, based on the income distribution curve (Lorenz curve). As an example, figure 4–2 shows the Lorenz curve for Washington, D.C., for 1980: 23 percent of households at lower income levels earned just 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.

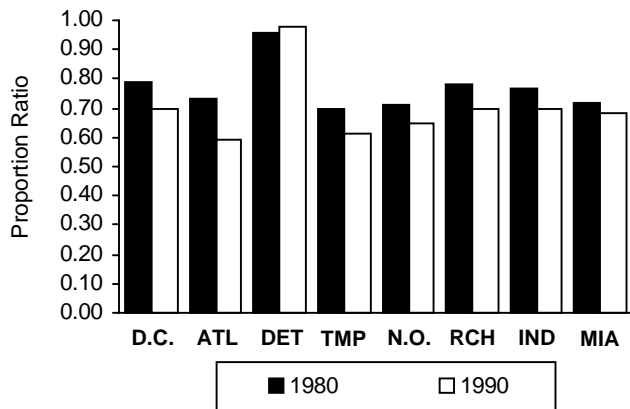
diagonal and the curve shrinks, and the Gini coefficient approaches zero. The Gini coefficient was calculated by (1) computing the area of each rectangle formed by the x values (based on the number of households in each income category) and the y value (based on the aggregate income for those households) 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.<sup>4</sup> (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.<sup>5</sup> 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)<sup>6</sup> 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.<sup>7</sup>

## 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

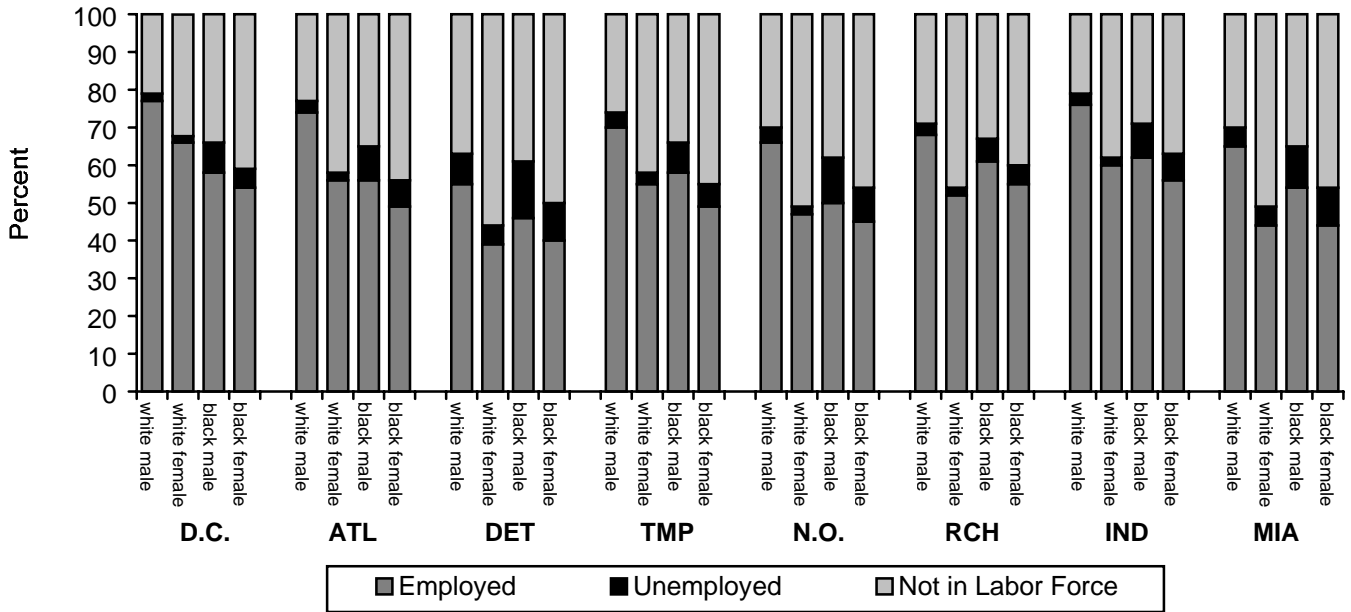
for 1980 and 1990. In New Orleans, there was a dramatic decline in employment for black males, which is in line with the large increase in homicide in this group, according to the hypothesis concerning employment and homicide trends. In Richmond, there was a smaller decline in employment for black males 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.

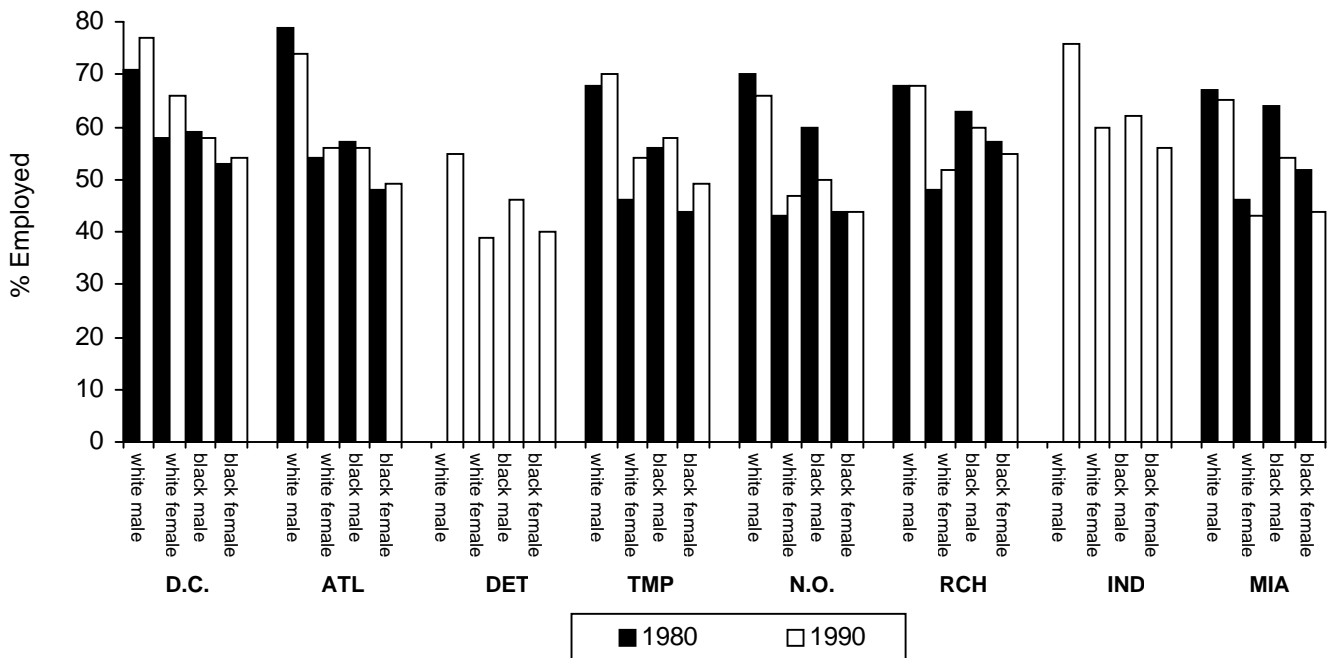
Figure 4-8 shows the change in percentage of households headed by married couples between 1980 and 1990, again using census data. The percentage of households headed by married couples decreased in all cities, in some cities dipping close to or below 50

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



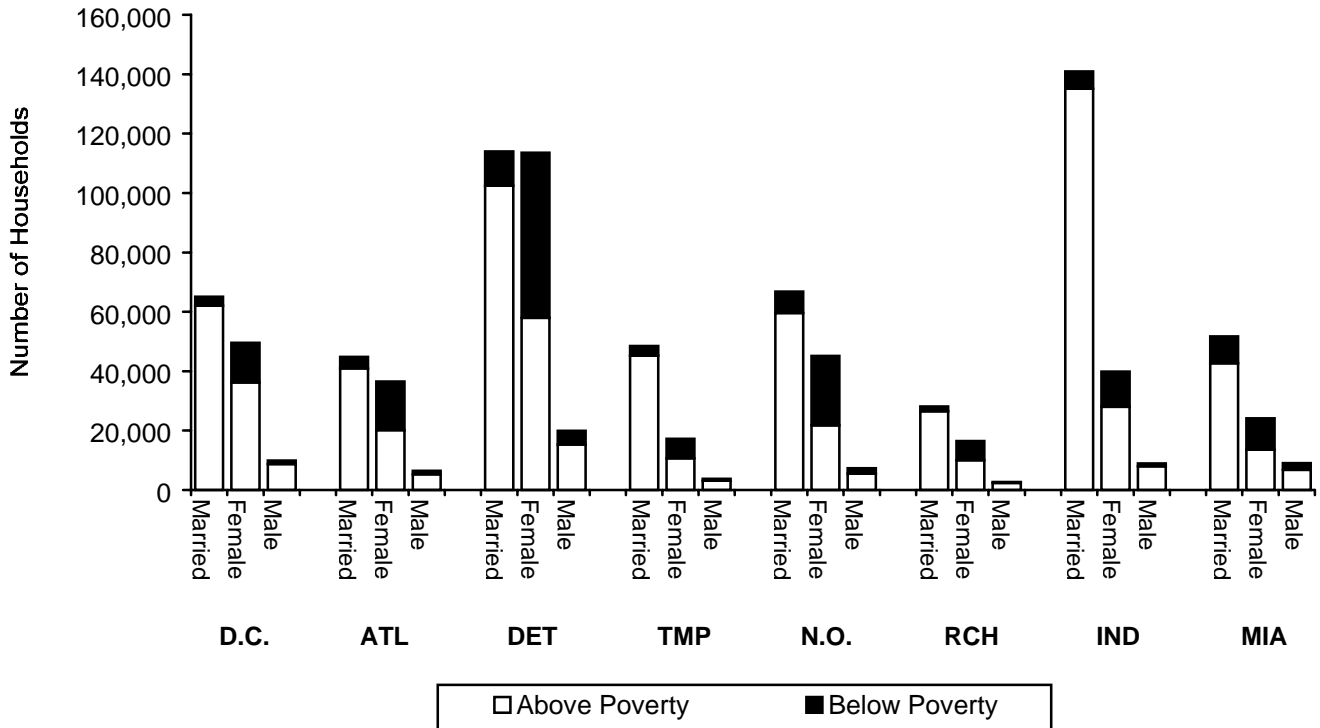
**Note:** Chart depicts employment status for individuals 16 and older.  
**Source:** U.S. Bureau of the Census, 1980, 1990.

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



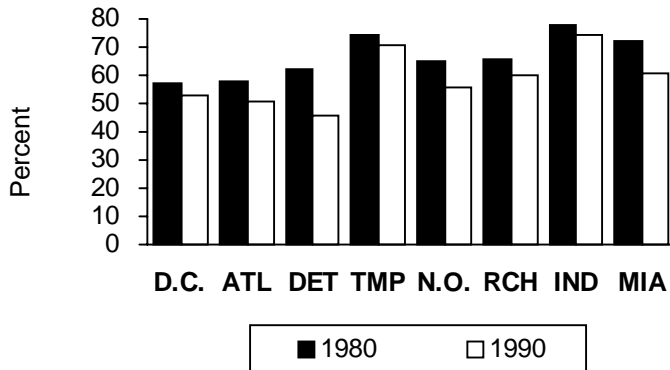
**Note:** Census employment data for 1980 is unavailable for Detroit and Indianapolis.  
**Source:** U.S. Bureau of the Census, 1980, 1990.

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



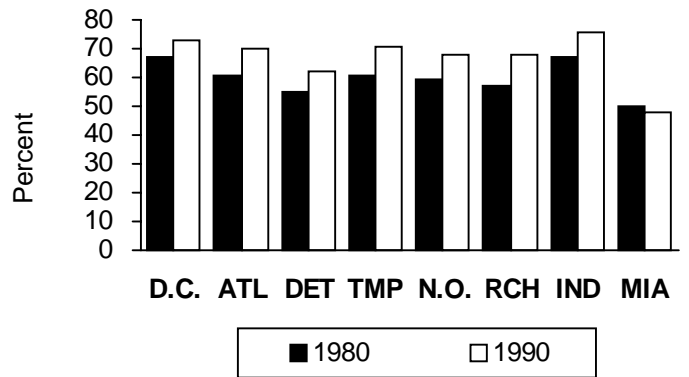
Source: U.S. Bureau of the Census, 1980, 1990.

**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.<sup>8</sup>

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

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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

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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.<sup>9</sup> 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.<sup>10</sup> 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-



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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.<sup>11</sup> 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.

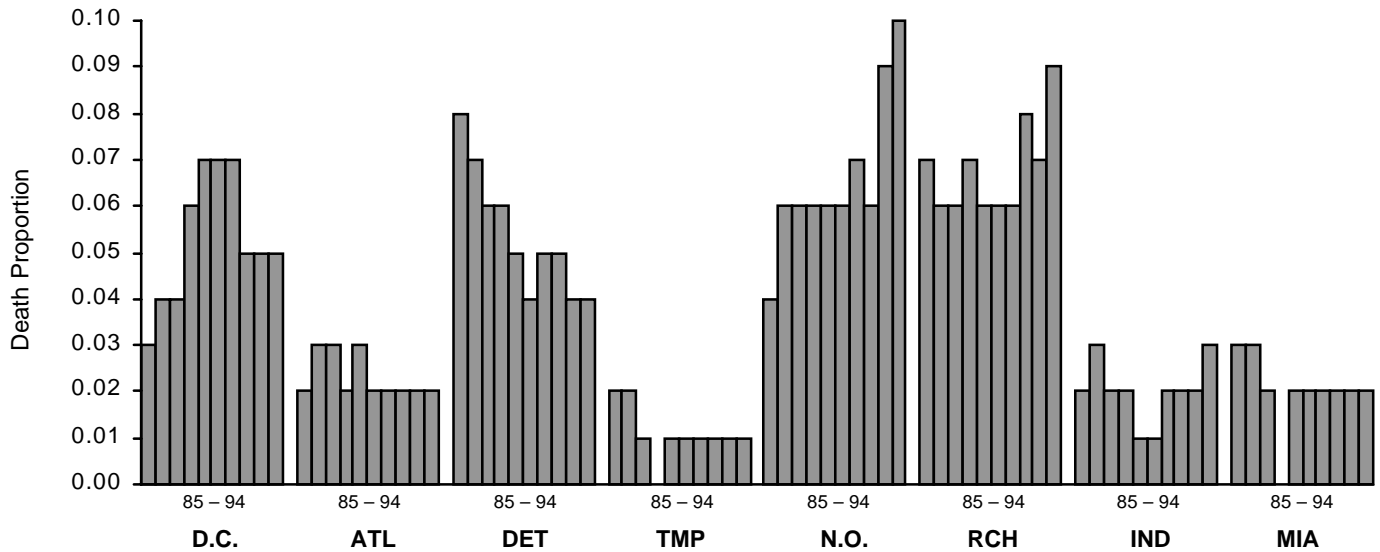
It is the research team’s interpretation that these homicide and death proportion trends are not directly attributable to changes in EMS but rather reflect the serious violence in the cities, with EMS having an ameliorative role. If nothing else were known about the cities and the observed death proportions 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.

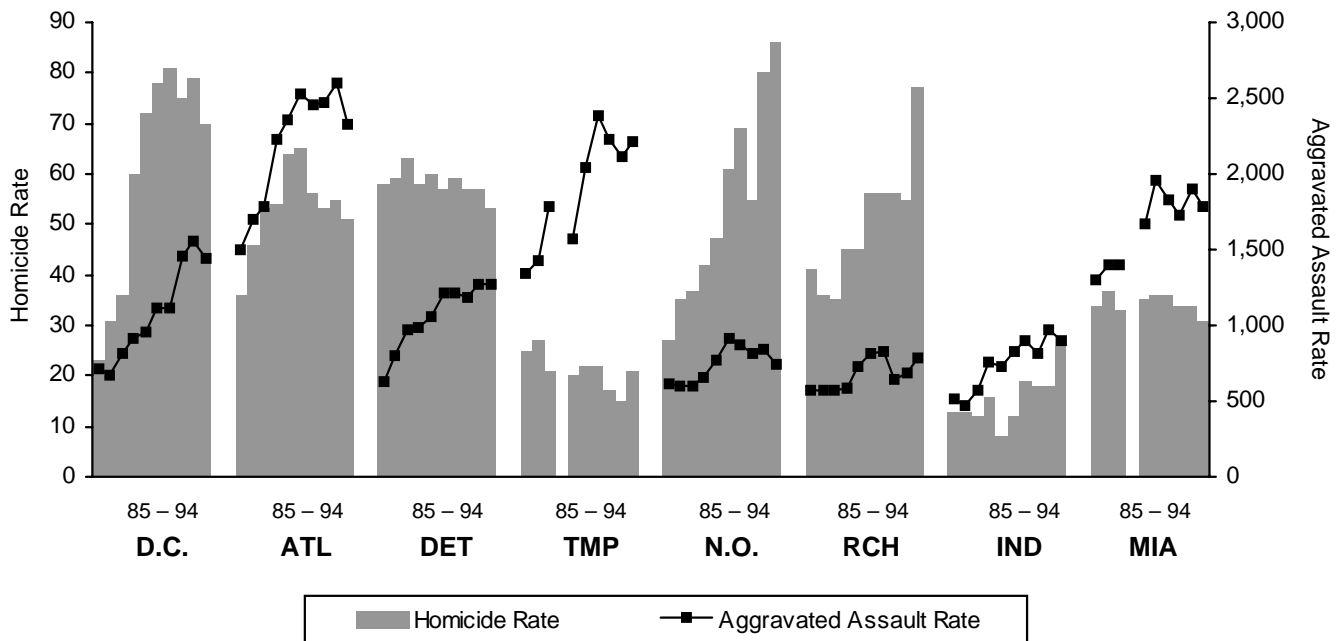
The victim/offender relationship was examined using data from the Supplemental Homicide Reports (SHR).<sup>12</sup> The SHR victim/offender relationship codes were combined into the following three categories: (1) intimate/family,<sup>13</sup> including relatives, step-relatives, in-laws, and common 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.<sup>14</sup> However, looking only at cases in which the victim/offender relationship was determined, the percentage of female homicides that

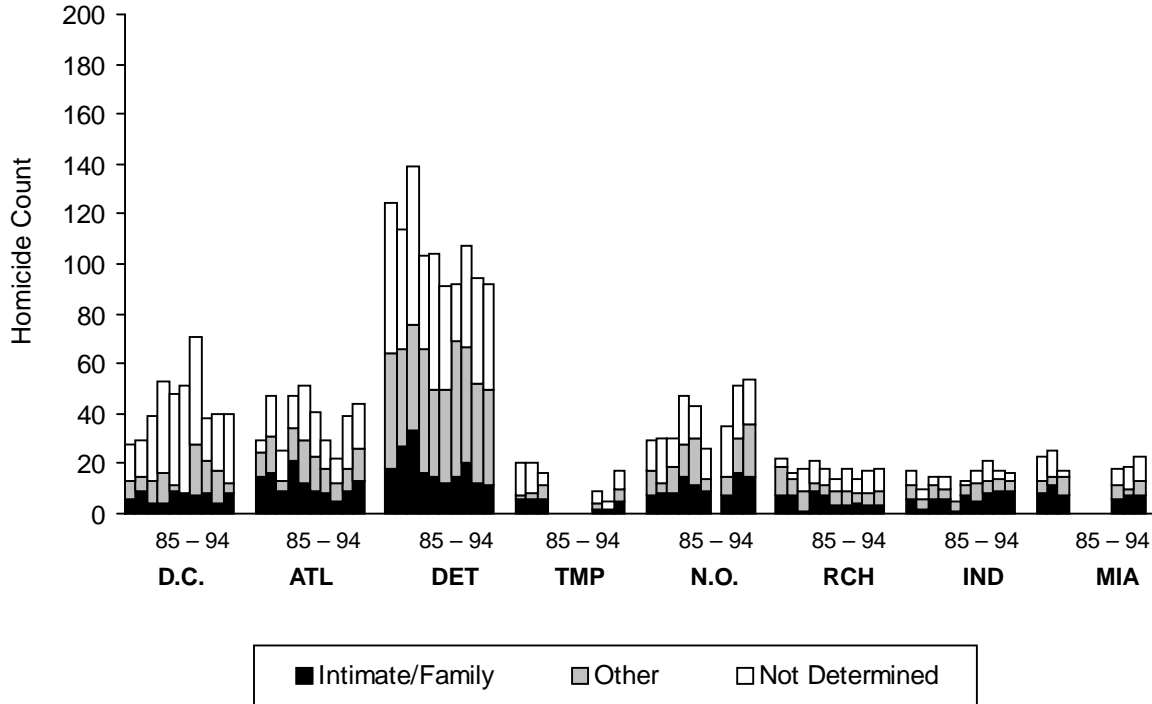
**Table 4–1. Intimate/Family Homicides by Victim’s Gender, 1985–1994**

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.

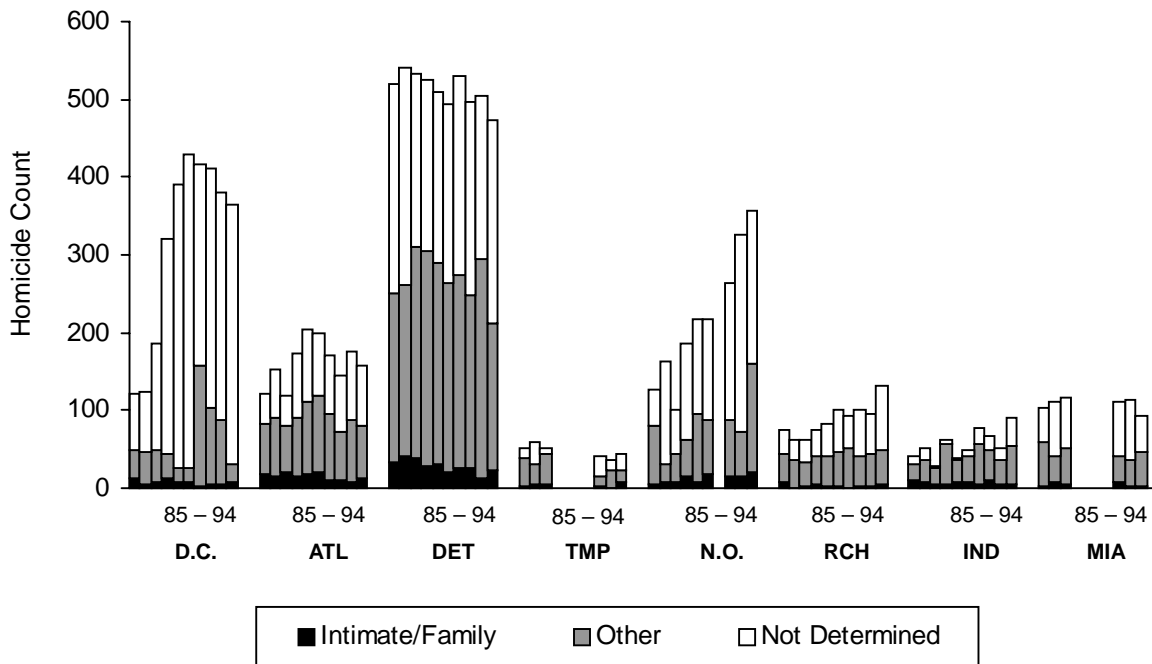
Source: Federal Bureau of Investigation, Supplemental Homicide Reports.

**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.

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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.<sup>15</sup>

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

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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.<sup>16</sup> 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.<sup>17</sup>

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



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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

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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.

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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.



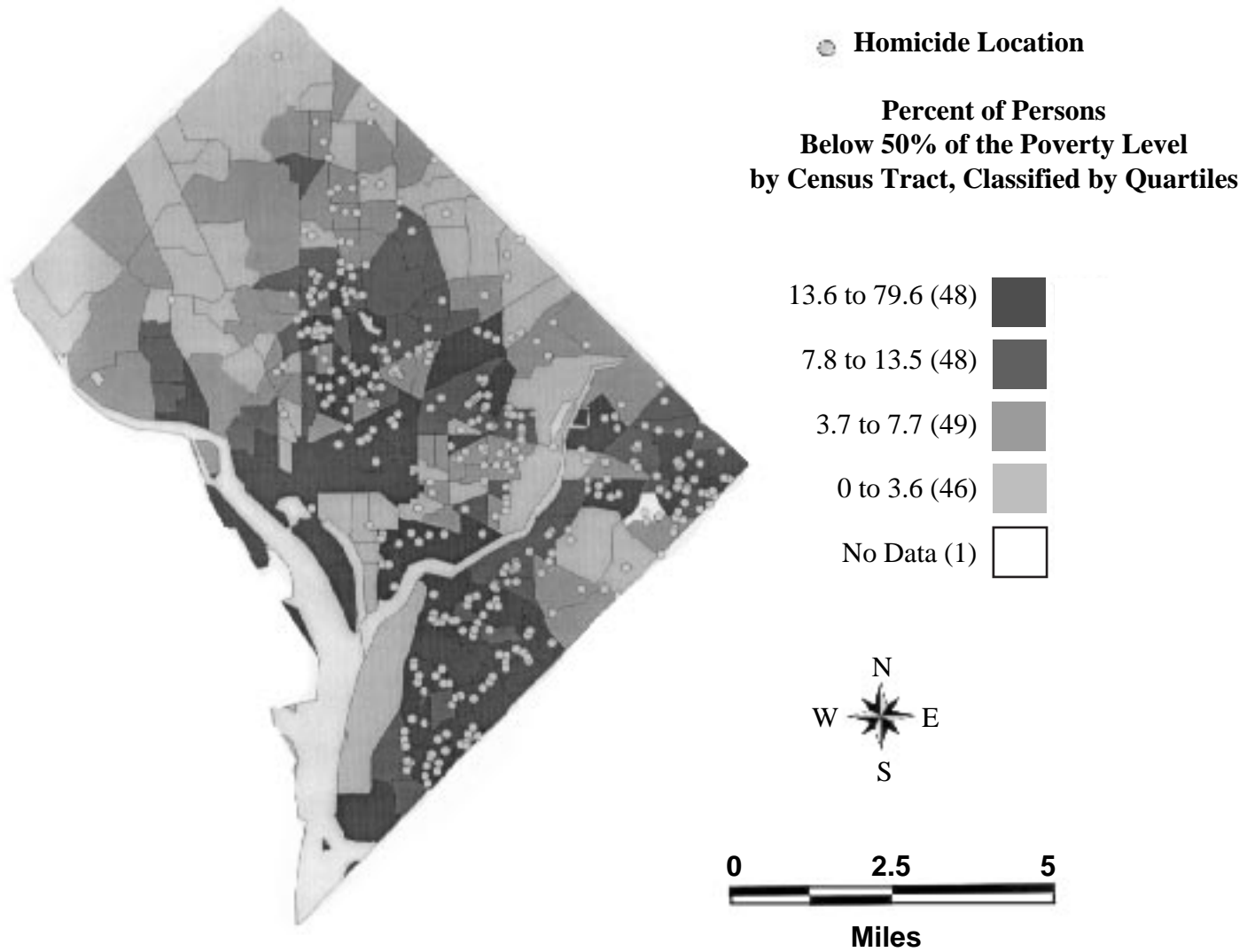
## Homicides and Poverty in Washington, D.C., 1994

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.