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The Age-Sex Pattern of Homicide Victims in Post-Katrina New Orleans

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Introduction (0.5 pages)

There has been a surge in the number of homicides in post-Katrina New Orleans [VanLandingham 2007], earning it (once again) the label of homicide capital of the United States. Based on the available data, it has been estimated that murder rate in 2006 was 69% higher than in 2004. The high number of homicides is unexpected, considering that it is estimated roughly half the population of New Orleans has not returned to the city after hurricane Katrina. In fact, since low income residents have not been able return, and low income is a risk factor, some had predicted (or perhaps hoped) that New Orleans' new, smaller population would be less affected by crime.

The exceptionally rapid increase in the number of homicides has raised concern that the city is experiencing a homicide "epidemic", that is affecting large sections of the population. Unfortunately, in absence of reliable census data, it is difficult to calculate murder rates among different segments of the population. In absence of accurate homicide rates for population subgroups, data on the age-sex structure of homicide victims may be able to help us better understand the surge in homicides. Demographers have long used population pyramids as a tool to graphically describe changes in the age-sex structure of populations. In this paper, we use population pyramids of homicide victims to illustrate that the recent increase in the number of homicides has not occurred across all segments of the population, but rather took place among a very narrow segment of the population.

Background (1-2 pages)

- lit review on homicide trends in the US
- lit review on surge in homicides [McCarthy 2007a][McCarthy 2007b][VanLandingham 2007]
- lit review on the age-sex structure of homicide victims
- lit review on age-sex differences in risk/rates

Data and Methods

This paper draws on two main sources of data. First, we use data from the FBI's online database of Supplementary Homicide Reports to describe trends in the number of homicides in Louisiana [Snider et al. 2006]. The database contains annual data on the number of homicide victims for the period from 1980 through 2004 (note that the database does not contain any data for 1991). The database also allow breakdown by age group. We use this information to differentiate between victims aged 15 or younger, 15-24, 25-49, and 50 or older. Unfortunately, the database does not permit splitting the age group 24-49 into more detailed categories.

Our second database consists of a listing of the victims of each of the 162 homicides that occurred in New Orleans during 2006. This database was compiled by journalists Laura Maggi and Richard Russell at the Times Picayune newspaper on the basis of police reports¹. Highlights from the database are available on the Times Picayune website [REF to TP map]. The complete database contains detailed information about each victim, including the name, age, gender, race, and residence of the victim. It also contains detailed information about the homicide, including the date and location of the homicide.

¹ [confirm this]

In the few cases where the database did not contain the sex and/or age of the respondent, we attempted to retrieve them the web and the Times Picayune obituaries [REF]. We were unable to retrieve the age or sex of XX victims, which reduces the number of victims in our working database to xxx. We use this database of victims to construct an age-sex pyramid of homicide victims, which is compared with comparable data from an earlier period [Lowry et al. 1988].

Results

Trends in the Number and Age Distribution of Homicide Victims in Louisiana

Figure 1 shows trends in the age distribution of homicide victims in Louisiana for the period from 1980 through 2004. During this time period, there were an average number of 632 homicides per year, but the annual number fluctuated considerably with the highest levels being observed for the periods from 1980-82 and 1989-96.

Figure 1 about here

The early 1980s (1980-82) were characterized by an above average number of homicides, exceeding 660 per annum. From 1983 onward, the number of homicides declined notably, and for the entire period from 1984 through 1988 the annual number of homicides did not exceed 575. In two of those years (1985 and 1987), the number was below 500. From 1989 onward, however, there was a steady increase in homicides. For the entire period from 1990 through 1996, there were over 700 homicides per year, with a peak exceeding 850 homicides in 1993 and in 1994. From 1995 onward, the number declined steadily,

dropping below 500 in 1999. Although the number of homicides subsequently increased, it stayed below 600 through 2004.

The information on the age distribution of the homicide victims shown in Figure 1 suggests that fluctuations in the total number of homicides coincide with changes in the age pattern of homicide victims. Specifically, Figure 1 shows that increases in the annual high number of homicides are caused predominantly by increases in the number of victims aged 18-24, and to a lesser extent by increases in the number of victims aged 25-49. Although the homicide database does not provide more detailed breakdowns for the age-group 25-49 for Louisiana, national data show that the number of homicide victims is concentrated at the lower end of this age range [U.S. Census Bureau, 2003][REF].

Figure 1 further shows that the number of victims aged 15 or younger, and the number of victims aged 50 or older fluctuated very little, and do not appear to have contributed much to the changes in the total number of homicides. It is also worth noting that the annual number of female homicide victims did not vary much during the period from 1980-2004 (results not shown).

As an illustration, let's focus on the period of rapidly increasing homicides from 1986 to 1993. Between 1987 and 1993 the total number of homicides increased from 496 to 874, an increase of 378. During this same period, the number of victims aged 15-24 increased from 122 to 341 (an increase of 219), while the number of victims aged 25-49 increased from 269 to 394 (an increase of 125). In other words, 58% (219 out of 378) of the increase in the number of homicides is accounted for by increases in the number of

victims aged 15-24, and an additional 33% is accounted for by increases in the number of victims aged 25-49. During this same time period, the total number of female victims increased from 144 to 167 (a 16% increase), but number of male victims nearly doubled from 352 to 699 (a 99% increase). Thus, the fluctuations in the total number of homicide victims are caused predominantly by changes in the number of relatively young male victims.

In other words, periods characterized by an exceptionally high number of homicides – such as is the case in post-Katrina New Orleans – do not necessarily imply that the risk of homicide has increased uniformly throughout the population. Indeed, these excess homicides are likely to result from a drastic increase in the number of teenage and young adult male homicide victims, with little or no change in the number of victims in other age-sex groups.

The Age-Sex Distribution of Homicide Victims in New Orleans

In this section, we examine whether the post-Katrina surge in homicides in New Orleans has resulted in a change in the age-sex distribution of homicide victims. Although there is very little published information on the age-sex distribution of homicide victims in New Orleans, a 1988 study shows combined data on the age-sex distribution of homicide victims for 1979, 1982, 1985, and 1986 [Lowry et al., 1988]. The population pyramid of homicide victims for these years is shown in Figure 2a. The population pyramid is a graphic representation of the number of homicide victims in each age-sex group expressed as a percentage of the total number of homicide victims. Consistent with the

literature, Figure 2a clearly shows that there were very few female homicide victims. Figure 2a further shows that the brunt of the homicide victims was 25-34 years of age, followed by those aged 15-24 and 35-44. Homicides of children under 15 years of age were minimal, as were homicides of persons aged 45 and older. Males aged 25-34 account for x %, and males aged 15-24 for y% of all homicide victims during these four calendar years.

Figure 2a about here

Figure 2b shows the age-distribution of homicide victims in 2006, roughly 6-18 months after Hurricane Katrina, using the same scale. The results show that age-sex structure of post-Katrina homicide victims has a radically different shape. Most notably, the age-sex distribution of homicide victims has become substantially younger. In 1979-86, the largest number of homicides victims was in the age group 24-35, but in 2006 the number of victims aged 15-24 greatly exceeded the number aged 25-34. In addition, the percentage of male victims has shifted even further toward males, declining from x% in 1979-86 to y% in 2006. Figure 2b shows that in 2006, males aged 15-24 accounted for [45%?] of all homicide victims, while males aged 25-34 accounted an additional [25%] of homicide victims.

A closer comparison of the two age-sex pyramids of homicide victims shows that apart from the dramatic change for 15-24 year-old male victims, the shape of the two pyramids

is fairly similar. In other words, the surge in the number of homicide is highly concentrated among young males.²

Figure 2b about here

Conclusions and Discussion

Recently, New Orleans made the headlines because of a very a rapid increase in the number of homicides. Though data are scarce, recent estimates indicate that the homicide rate for 2006 was two thirds higher than in 2004 and 50% higher than in 2005 [VanLandingham 2007]. This has created serious concerns about the safety of both residents and visitors. However, the observed increases in the total number of homicide victims does not necessarily imply that the risk has increased equally for all population subgroups. Using data on that age distribution of homicide victims in the state of Louisiana for the period from 1980 through 2004 we show that upswings in the number of homicides can be attributed largely to increases in the number of young victims, especially young males. A comparison of the population pyramid of homicide victims in New Orleans for the period 1979-86 and 2006 illustrate that there has been a dramatic change in the age-sex composition of homicide victims. The comparison of the two pyramids indicates that the surge in homicides stems predominantly from an increase in the number of homicide victims among young males aged 14-24.

These findings imply indicate that the rapid increase in the number of homicides do not necessarily imply that living or visiting New Orleans has become unsafe. The

² [**Who are these young male homicide victims? What sets them apart from the other victims?]

finding the risk of homicide is highly concentrated among a relatively small group of young males highlights the need for further research to investigate the factors that may be responsible for the surge in homicides among this group.

References

McCarthy 2007a

VanLandingham 2007

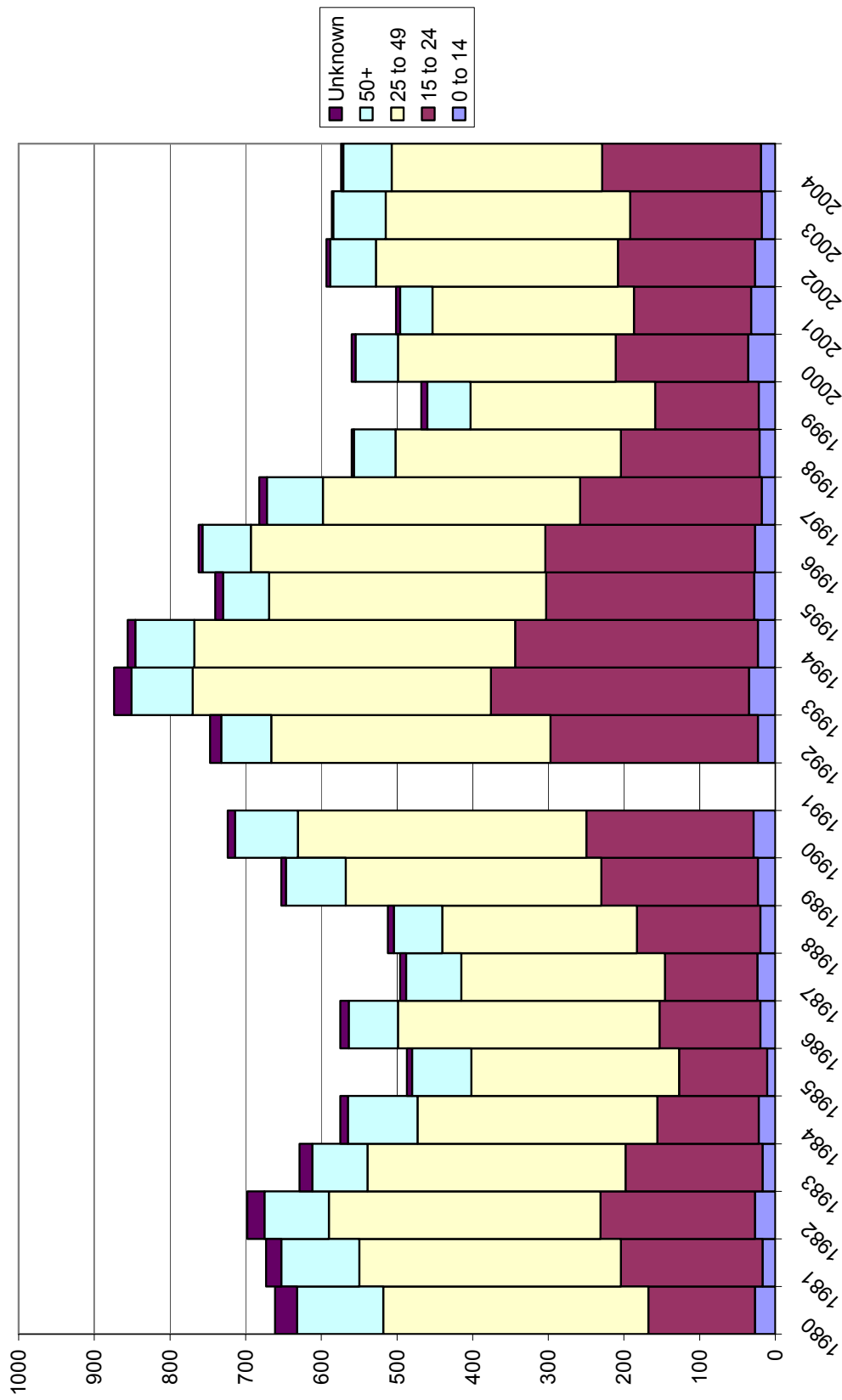
Wilson et al. 2004

Philips 2006

Monkkonen, Eric

Lowry et al. 1988

Figure 1: Number and Age Distribution of Homicide Victims, Louisiana 1980-2004



Note: Data for 1991 are not available.

