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Crime in WV Cities: A Comparative Analysis of Selected Population Groups and Victim-Offender Relationships

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The rise in violent crime in US cities and the apparent change in crime trends since 2005 have been highlighted in many reports and media outlets. For the first time since the early 1990's, the number of violent crimes in the US rose for the second straight year in 2006. In 2005, the FBI (2006) reported that violent crime was up by 2.3% in the US. This included a 3.4% increase in murders, a 3.9% increase in robberies, and a 1.8% increase in aggravated assaults. Only forcible rapes declined by 1.2% (Federal Bureau of Investigation, 2006).

Recently released figures for 2006 indicate a continued upward trend. Violent crime is reportedly up 1.9% from 2005 (Federal Bureau of Investigation, 2007). The greatest increase is again for robbery offenses (7.2%). Reports indicate that murder is also up by 1.8% while aggravated assaults and forcible rapes have dropped by 0.2% and 2.0%, respectively. Violent crime increases, and more specifically robbery offenses, are even more pronounced in mid-size cities with less than 500,000 populations (Federal Bureau of Investigation, 2007). Murder, however, has increased the most in the country's largest cities.

At the first indication of the 2005 increases, the Police Executive Research Forum (PERF) made monitoring crime trends a priority. In August 2006, a violent crime summit was held and leaders concluded that the nation was facing a surge in violence (Police Executive Research Forum, 2006). Preliminary data for 2006 were collected from 56 law enforcement agencies across the country and it was found that many cities were experiencing large increase in murders and other violence. In addition, several cities reported "milestones" in recent crime levels in their jurisdictions.

The causes for the recent increases in crime rates across the nation are not entirely clear. Reasons suggested for these increases range from cuts in federal funding for local law enforcement and a shift in priority to counterterrorism issues to more gangs, weapons, and younger violent offenders on the streets (Johnson, 2006; Murr and Noonoo, 2007; Pavlak and Walters, 2007). Others have attributed the rise in the US crime rate to the country's mid-size cities where the greatest increases have occurred (Police Executive Research Forum, 2006).

Nonetheless, it is not entirely clear that the levels of crime in WV coincide

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Report Highlights

- Crime rates in WV cities vary directly with population size. The greater the population, the greater the crime rate.
- Crime rates in the six principal or largest cities in WV were on average about 3.5 times greater than the smallest cities between 2002 and 2006.
- For any given year between 2002 and 2006, WV's violent crime rate was roughly half that of the nation.
- With the exception of violent crime rates in 2006, WV's property and violent crime rates have not adhered to national trends.
- The property crime rate in WV has steadily increased over the past five years, during a period of decline in the nation.
- Violent crimes accounted for only 4.1% of all offenses reported in WV during 2006.
- In 2006, property crimes accounted for a greater proportion of all offenses reported by law enforcement in principal cities compared to metro and nonmetro county agencies.
- Nonindex crimes were more prevalent in smaller size municipalities and county population groups in 2006.

Report Highlights

- Between 2002 and 2006, mid-size cities with a population over 10,000 experienced the greatest increase in crime rates, from 74.7 crimes per 1,000 residents in 2002 to 88.2 in 2006.
- Between 2002 and 2006, Charleston's crime rate was consistently higher than the rates of crime in other principal cities.
- The cities of Huntington, Morgantown, and Parkersburg each experienced an increase in total crime rates over the past five years.
- In 2006, violent crime rates varied considerably across all principal cities ranging from a high of 8.8 in Charleston to a low of 2.7 in Parkersburg.
- The cities of Charleston, Huntington, and Martinsburg had the highest rates of property crime among principal cities in 2006.
- The city of Huntington had the highest property crime rate for all six principal cities in 2006.
- Metro and nonmetro county law enforcement agencies were substantially more likely to report victims as being domestically related to their offenders.
- Only principal cities and other cities with a population greater than 10,000 had a greater proportion of nondomestic victims.
- Nearly two-thirds of all victims of *violent* crime (62.2%) were in a nondomestic relationship with their offender in 2006.

with these national trends. Recent local news stories have actually highlighted declines in violent crime in WV's largest city since 2004. In January 2007, the Charleston Gazette reported that murder, aggravated assault, and robbery were all down considerably from 2004 to 2006 (Balow, 2007). As a result, some have speculated that much of the crime has been "pushed out" of cities such as Charleston to surrounding communities.

On the contrary, other large population cities in WV have reported recent increases in crime. For instance, the local newspaper in Huntington recently reported that both violent and property crimes had increased between 2005 and 2006 (Johnson, 2007). It was reported that the number of violent and property crimes in Huntington increased by 6.8% and 4.0% in 2006, respectively. Local authorities cite drug trafficking to be a principal reason for the recent increases in crime (Johnson, 2007).

In spite of the recent attention given to the increases in crime both nationally and locally, there has not been a statewide analysis of crime trends in WV. As a result, it is not clear whether crime in WV cities corresponds to the trends seen in many cities across the nation. For this reason, this report seeks to examine crime trends in various "principal" cities and other population groups in WV.

It is anticipated that this report will shed light on the patterns of crime in WV cities. Several population groups, including six principal WV cities, are examined to determine how crime trends differ according to population size. Additionally, this report looks at how victim-offender relationships vary across each population group. This

report begins with a comparative analysis of local and national crime rates.

Trends in WV and US Crime Rates

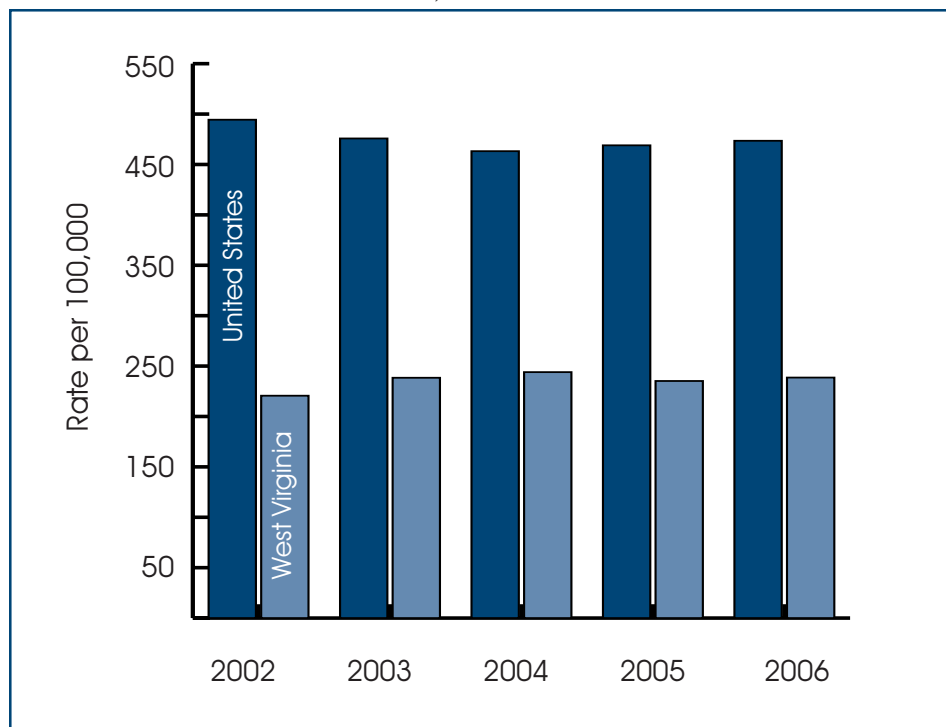
Graphs 1 and 2 provide a comparison of violent and property crime rates in WV and the US. In addition, these graphics offer an illustration of the magnitude of violent and property crime in WV compared to the nation as a whole.¹

The results generally indicate that crime rates in WV do not closely follow national trends. During periods of decline in crime nationally, WV has experienced slight increases in both violent and property crime rates. With the exception of violent crime rates in 2006, WV's property and violent crime rates have run counter to national trends.

At the national level, the violent crime rate in 2006 (473.5) was greater than in 2005 (469.0), but still less than the level experienced in 2002 (494.4). In WV, the violent crime rate in 2006 (238.6) was also higher than in 2005 (235.2). Additionally, the 2006 rate in WV was above the level experienced in 2002 (220.6). In terms of magnitude, violent crime rates in WV are roughly half that of the nation.

Property crime rates in WV have experienced a slight upward trend during a time when property crime has been declining nationally. Property crime rates in the US have decreased each year since 2002. In 2006, there were 3,334.5 property crimes per 100,000 US residents compared to 3,630.6 in 2002. Conversely, property crime rates in WV increased each year during this period until 2006. In 2005, there were 2,449.5 property crimes per

Graph 1
US and WV Violent Crime Rates, 2002-2006

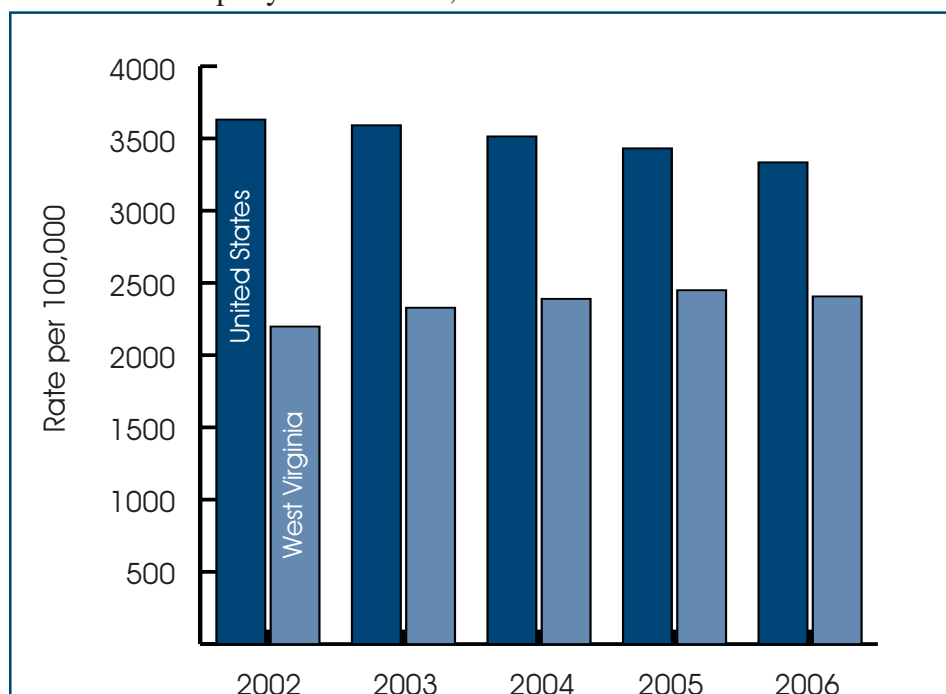


100,000 WV residents compared to 2,198.0 in 2002. A slight decline was seen in 2006 with 2,406.6 property crimes reported per 100,000 residents.

As a result of these conflicting trends, the property crime rate level in WV grew closer to that of the US during this 5-year period. In 2002, property crime rates in the US were about 65.0% greater than in WV. By 2006, these rates were only about 39.0% greater in the US than in WV.

While these results suggest that WV's state-level crime trends do not coincide with fluctuations at the national level, it remains to be seen whether similar patterns will be found at the city level. It is not clear whether recent increases in violent crimes in many major cities in the US are indicative of patterns of crime in WV cities. Thus, the following section begins our examination of crime in several "principal cities" and other selected population groups in WV.

Graph 2
US and WV Property Crime Rates, 2002-2006



Notes: The crime of arson is excluded from the WV property crime rate due to the absence of a national comparison. The FBI does not provide estimates of arson offenses in the calculation of the property crime totals.

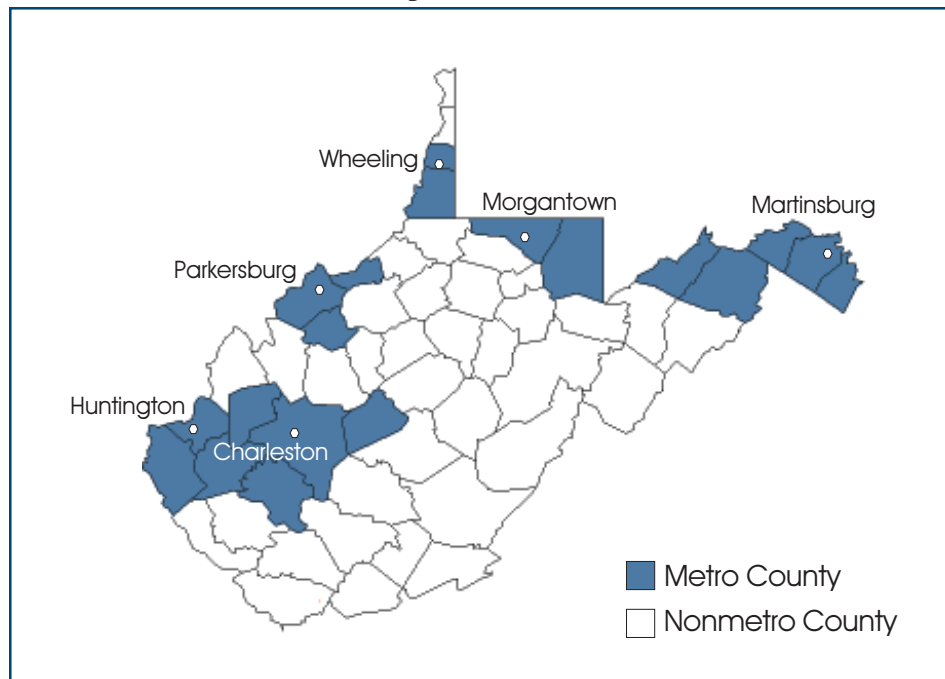
Comparative Analysis of Selected Population Groups

The following section presents the results of our analysis of crime patterns across selected population groups. To examine whether crime trends in WV cities coincide with the recent increases witnessed at the national level, this report identifies multiple population groups for analysis, including several "principal cities" as well as metro and nonmetro county populations.

Study Population Groups

Several population groups were constructed to assist in the analysis of crime trends in WV. However, a primary interest of this research is to examine the trends in crime across the "principal cities" of WV. Figure 1

Figure 1
WV Metro Counties and Principal Cities



provides a geographical representation of the six principal cities and metro and nonmetro counties examined in this report.

As shown in Figure 1, a total of six principal cities were selected for analysis. These cities include: Charleston, Huntington, Martinsburg, Morgantown, Parkersburg, and Wheeling. These principal cities represent the six largest cities in WV which are also located within a Metropolitan Statistical Area (MSA) (see Identification and Classification of Population Groups in the Methodology section of this report for further details).

Charleston is the largest city in the state with a population slightly over 50,000 residents and is the state capital. Huntington is the second largest city with a population slightly below 50,000 in 2006. Parkersburg ranks third in terms of population size with about 32,000 residents. Martinsburg is the smallest of the principal cities but is

located in the eastern panhandle in the Washington, DC area.

Depending on the year examined, the populations of Morgantown and Wheeling tended to vary between 27,000 to 30,000 residents. Morgantown is the home of West Virginia University and has experienced an increase in its population from 27,438 residents in 2002 to 28,654 in 2006. During the same period, the population of Wheeling declined from a population of 30,511 in 2002 to 29,330 in 2006.

In addition to the principal cities, this report also distinguishes between other cities of varying population size and metro and nonmetro counties. As shown in Figure 1, a total of 19 metro counties were identified for this report. The remaining 36 counties were categorized as nonmetro counties. Table 5 in the Methodology section of this report provides a complete breakdown of the Census estimates for

all of the population groups included in this study. The following section describes the distribution of offenses by each population group.

Distribution of Offenses by Population Group

In 2006, the majority of all criminal offenses reported by law enforcement in WV were nonindex type crimes (52.9%). Property crime accounted for 43.0% of all offenses while only 4.1% of offenses were violent crimes (see Table 1). However, there are some differences in the distribution of offenses when compared across the various population groups.

While there is little variation in the percentage of violent crimes reported across population groups, it seems clear that property crimes are more prevalent in principal cities compared to the other population groups. At the same time, however, nonindex crimes appear to be more common in other municipalities with smaller population sizes and metro and nonmetro county population groups.

As shown in Table 1, violent crimes made up 4.9% of all crimes reported in principal cities in 2006. For all other population groups, violent crimes comprised between 3.5% and 4.1% of crimes. As a result, the proportion of violent crimes reported in principal cities in 2006 was not substantially greater than the percentage of crimes reported by agencies in other population groups.

On the other hand, property and nonindex crimes tend to vary considerably across the different population groups. In particular, property crimes were more prevalent in principal cities compared to other

Table 1
Distribution of Crime by Population Group, 2006

	Total	Violent Crime		Property Crime		Nonindex	
		#	%	#	%	#	%
Principal City	25,101	1,219	4.9%	12,169	48.5%	11,713	46.7%
Charleston	7,583	447	5.9%	3,634	47.9%	3,502	46.2%
Huntington	6,833	348	5.1%	3,842	56.2%	2,643	38.7%
Martinsburg	1,920	114	5.9%	909	47.3%	897	46.7%
Morgantown	2,561	108	4.2%	1,028	40.1%	1,425	55.6%
Parkersburg	3,635	87	2.4%	1,746	48.0%	1,802	49.6%
Wheeling	2,569	115	4.5%	1,010	39.3%	1,444	56.2%
Over 10,000	10,323	422	4.1%	4,195	40.6%	5,706	55.3%
Over 5,000	5,348	206	3.9%	2,217	41.5%	2,925	54.7%
All Other Cities	7,017	249	3.5%	3,071	43.8%	3,697	52.7%
Metro County	31,798	1,215	3.8%	13,525	42.5%	17,058	53.6%
Nonmetro County	25,537	1,044	4.1%	10,016	39.2%	14,477	56.7%
Total	105,124	4,355	4.1%	45,193	43.0%	55,576	52.9%

Note: Percents may not total to 100.0% due to rounding.

population groups. For instance, property crimes constituted 48.5% of crimes reported by law enforcement in principal cities compared to 39.2% and 42.5% of nonmetro and metro counties, respectively.

On the contrary, nonindex crimes were more prevalent in smaller size municipalities and county population groups in 2006. Over fifty percent of all offenses reported by law enforcement in small municipalities as well as metro and nonmetro counties consisted of nonindex offenses. Nonmetro counties had the largest percentage of reported nonindex offenses at 56.7%, followed by municipalities with a population over 10,000 at 55.3%. Only 46.7% of all crimes reported by law enforcement in

principal cities were comprised of nonindex offenses in 2006.

The findings presented in Table 1 further indicate that there was substantial variation in the distribution of offenses across the six principal cities in 2006. In a comparison of the principal cities, the proportion of violent crime ranged from a low of 2.4% in Parkersburg to a high of 5.9% in both Charleston and Martinsburg.

Likewise, property crime also varied somewhat across the principal cities. Huntington experienced the greatest proportion of property crime (56.2%) in 2006. In Wheeling, a city with roughly 20,000 fewer residents than Huntington, property crime accounted for just 39.3% of all offenses.

Nonindex crime, on the other hand, varied from a high of 56.2% in Wheeling to a low of 38.7% in Huntington. Nonindex crime was also more prevalent in Morgantown at 55.6% compared to the state as a whole.

In the remaining three city population groups, the proportion of offenses that were violent decreased as population size declined. Conversely, property crime proportions increased as city population size declined. However, nonindex crime accounted for the majority of all offenses in small and mid-size cities.

Table 1 also shows the distribution of crime reported to county and state level law enforcement in metro and nonmetro counties. Property crime accounted for a greater proportion of all

offenses in metro counties (42.5%) than in nonmetro counties (39.2%). As a percentage of all offenses, violent (4.1%) and nonindex (56.7%) crimes were greater in nonmetro counties.

Crime Trends by Population Group

Graph 3 illustrates the recent 5-year trend in overall crime rates for each of the city population groups. Generally, the trend in crime rates increased somewhat during this period. In addition, it is clear that crime rates in WV cities vary directly with population size. The greater the population, the greater the crime rate. In fact, crime rates in the principal or largest cities were on average about 3.5 times that of the smallest cities.

It is also interesting to note that there were substantial increases in rates of crime for mid-size WV cities during this five-year period. The difference in crime rates for the two middle population groups (cities over 10,000 and over 5,000) grew substantially from 2002 to 2006. In 2002, the difference in crime rates between these two groups was only 12.2%. By 2006, the difference was 32.2%.

Thus, mid-size cities with populations over 10,000 experienced the greatest change, increasing from a rate of 74.7 in 2002 to 88.2 in 2006. This corresponds to an 18.1% increase. Principal cities also saw growth in their crime rates during this period. For these

cities, crime rates increased by 6.1%, from 114.9 to 121.9.

On the contrary, the state's smaller cities had more stable crime rates. Both cities with 5,000 to 9,999 residents and cities with under 5,000 residents ended the period with roughly the same rates as seen in 2002. On average, the state's smallest cities experienced about 34 crimes per 1,000 residents. Cities with 5,000 to 9,999 residents experienced about 69 crimes per 1,000 residents.

Five-year crime trends are further examined by crime type and population group in Table 2. Total crime is divided into the three main categories: violent, property, and nonindex. Additionally, crime trends at the metro/nonmetro

Graph 3

Total Crime Rates per 1,000 Residents by City Population Groups, 2002-2006

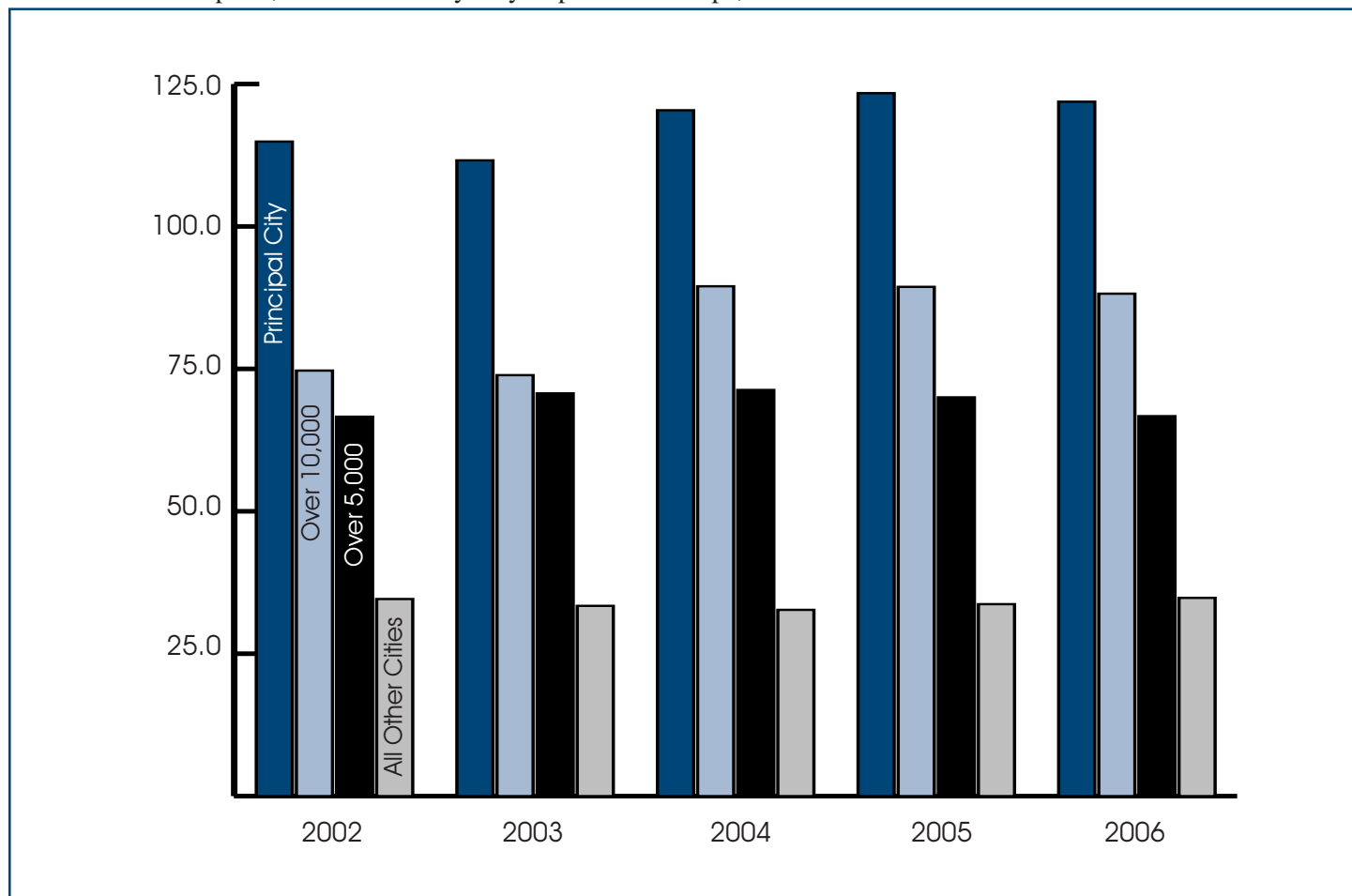


Table 2
Trends in Crime Rates by Population Group, 2002-2006

	2002		2003		2004		2005		2006	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Principal City	23,903	114.9	23,171	111.6	24,927	120.4	25,491	123.4	25,101	121.9
Violent Crime	1,102	5.3	1,181	5.7	1,351	6.5	1,223	5.9	1,219	5.9
Property Crime	11,307	54.4	11,350	54.7	11,839	57.2	12,408	60.0	12,169	59.1
Nonindex	11,494	55.3	10,640	51.2	11,737	56.7	11,860	57.4	11,713	56.9
Over 10,000	8,895	74.7	8,751	73.9	10,575	89.5	10,510	89.4	10,323	88.2
Violent Crime	347	2.9	315	2.7	390	3.3	385	3.3	422	3.6
Property Crime	3,953	33.2	4,044	34.1	5,031	42.6	4,647	39.5	4,195	35.8
Nonindex	4,595	38.6	4,392	37.1	5,154	43.6	5,478	46.6	5,706	48.7
Over 5,000	5,373	66.6	5,700	70.7	5,743	71.3	5,608	70.0	5,348	66.7
Violent Crime	155	1.9	205	2.5	219	2.7	175	2.2	206	2.6
Property Crime	2,400	29.8	2,475	30.7	2,574	32.0	2,482	31.0	2,217	27.7
Nonindex	2,818	34.9	3,020	37.5	2,950	36.6	2,951	36.8	2,925	36.5
All Other Cities	7,007	34.6	6,758	33.4	6,586	32.7	6,801	33.7	7,017	34.8
Violent Crime	294	1.5	348	1.7	289	1.4	252	1.2	249	1.2
Property Crime	2,993	14.8	3,009	14.9	2,965	14.7	3,129	15.5	3,071	15.2
Nonindex	3,720	18.4	3,401	16.8	3,332	16.5	3,420	17.0	3,697	18.3
Metro County	25,374	43.9	27,706	47.5	28,927	49.2	30,364	51.2	31,798	53.1
Violent Crime	999	1.7	1,211	2.1	1,147	1.9	1,110	1.9	1,215	2.0
Property Crime	11,275	19.5	12,985	22.3	12,533	21.3	13,302	22.4	13,525	22.6
Nonindex	13,100	22.7	13,510	23.2	15,247	25.9	15,952	26.9	17,058	28.5
Nonmetro County	22,441	36.4	23,609	38.3	23,875	38.8	25,533	41.5	25,537	41.5
Violent Crime	1,098	1.8	1,066	1.7	1,037	1.7	1,137	1.8	1,044	1.7
Property Crime	9,045	14.7	9,876	16.0	9,809	15.9	10,009	16.3	10,016	16.3
Nonindex	12,298	19.9	12,667	20.5	13,029	21.2	14,387	23.4	14,477	23.5
State Total	92,993	51.5	95,695	52.9	100,633	55.6	104,307	57.5	105,124	57.8
Violent Crime	3,995	2.2	4,326	2.4	4,433	2.4	4,282	2.4	4,355	2.4
Property Crime	40,973	22.7	43,739	24.2	44,751	24.7	45,977	25.3	45,193	24.9
Nonindex	48,025	26.6	47,630	26.3	51,449	28.4	54,048	29.8	55,576	30.6

Note: Rates shown are per 1,000 residents.

county and state level are also shown by crime category.

By 2006, violent crime rates had increased slightly in all but the smallest cities and the nonmetro counties. Principal cities saw increases in violent crime rates from 5.3 in 2002 to 6.5 in 2004 before dropping back to 5.9 in 2006. Cities with population over 5,000 also experienced their highest violent crime rates in 2004 at 2.7 per 1,000 residents, up from a low of 1.9 in 2002. However, cities with population over 10,000 saw their highest violent crime rates in 2006 at 3.6 per 1,000 residents. Law enforcement in metro counties reported roughly 2 violent crimes per 1,000 residents annually since 2004.

In the state's smallest cities, violent crime rates declined from a high of 1.7 in 2003 to 1.2 in 2006. Violent crime rates in nonmetro counties remained relatively flat during this 5-year period. On average, 1.7 violent crimes per 1,000 residents were reported in these counties.

Only cities with population 5,000 to 9,999 had lower property crime rates in 2006 than in 2002. After increases in 2003 and 2004, property crime rates in these cities were down to 27.7 in 2006 from 29.8 in 2002.

Property crime rates grew in all other city and county population groups. While principal cities experienced an increase in property crime rates from 2002 to 2006, the rate of 59.1 in 2006 was down slightly from the high of 60.0 in 2005. Likewise, cities with population over 10,000 and the state's smallest cities experienced declines from 2005 to 2006 but were still at levels higher than in 2002.

Property crime rates in the metro counties increased from a low of 19.5

in 2002 to 22.6 in 2006. Similarly, nonmetro counties experienced their lowest property crime rates of the period in 2002 at 14.7 and increased to a high of 16.3 in 2006.

In terms of nonindex crime, all but the state's smallest cities experienced a higher rate in 2006 than in 2002. Rates in mid-size cities with population over 10,000 increased the most from 38.6 in 2002 to 48.7 in 2006. Principal cities saw increases from 55.3 in 2002 to 56.9 in 2006. However, the 2006 rate was actually down slightly from 57.4 in 2005. This same trend was observed in cities with population 5,000 to 9,999. In 2006, rates were at 36.5 for this population group. This rate was up from 34.9 in 2002 but down from 36.8 in 2005.

The nonindex crime rate in the smallest cities was virtually unchanged from 18.4 in 2002 to 18.3 in 2006. Nonindex crimes were at their lowest in these cities in 2004 at 16.5.

Metro counties saw steadily increasing rates of nonindex crime during this 5-year period. In 2002, there were 22.7 nonindex crimes reported for every 1,000 residents. By 2006, this rate had increased to 28.5. Following the same trend, nonindex crime rates in nonmetro counties increased from a low of 19.9 in 2002 to 23.5 in 2006.

Crime Trends in Principal Cities

This section describes the trends in crime rates across six of WV's largest cities. The purpose is to examine how crime trends have varied over time in these cities. While each is a principal city of an MSA, population size varies considerably across this group. Therefore, crime *rates* are used to compare changes over time and across cities.

As anticipated, the total crime rate was consistently greater in Charleston compared to the other principal cities over this 5-year period (see Table 3). This is despite a decrease in Charleston's crime rate between 2004 and 2006. Charleston's overall crime rate declined from 160.0 offenses per 1,000 residents in 2002 to 149.1 in 2006.

Martinsburg and Wheeling also experienced similar declines in total crime rates from 2002 to 2006. In Martinsburg, the total crime rate fell each year from 2002 to 2005. Even with the slight increase in 2006 to 117.1, the crime rate was lower than in 2002 (140.8). Wheeling started the period with one of the lower crime rates and saw declines through 2004. After a slight increase in 2005, Wheeling's crime rate in 2006 was 87.6 per 1,000 residents, down from a rate of 93.2 in 2002.

Huntington, Morgantown, and Parkersburg each saw increases in total crime rates between 2002 and 2006. The greatest increase over this time occurred in Parkersburg where the crime rate was the lowest of the group in 2002 at 74.5. By 2006, the crime rate in Parkersburg had climbed to 114.5.

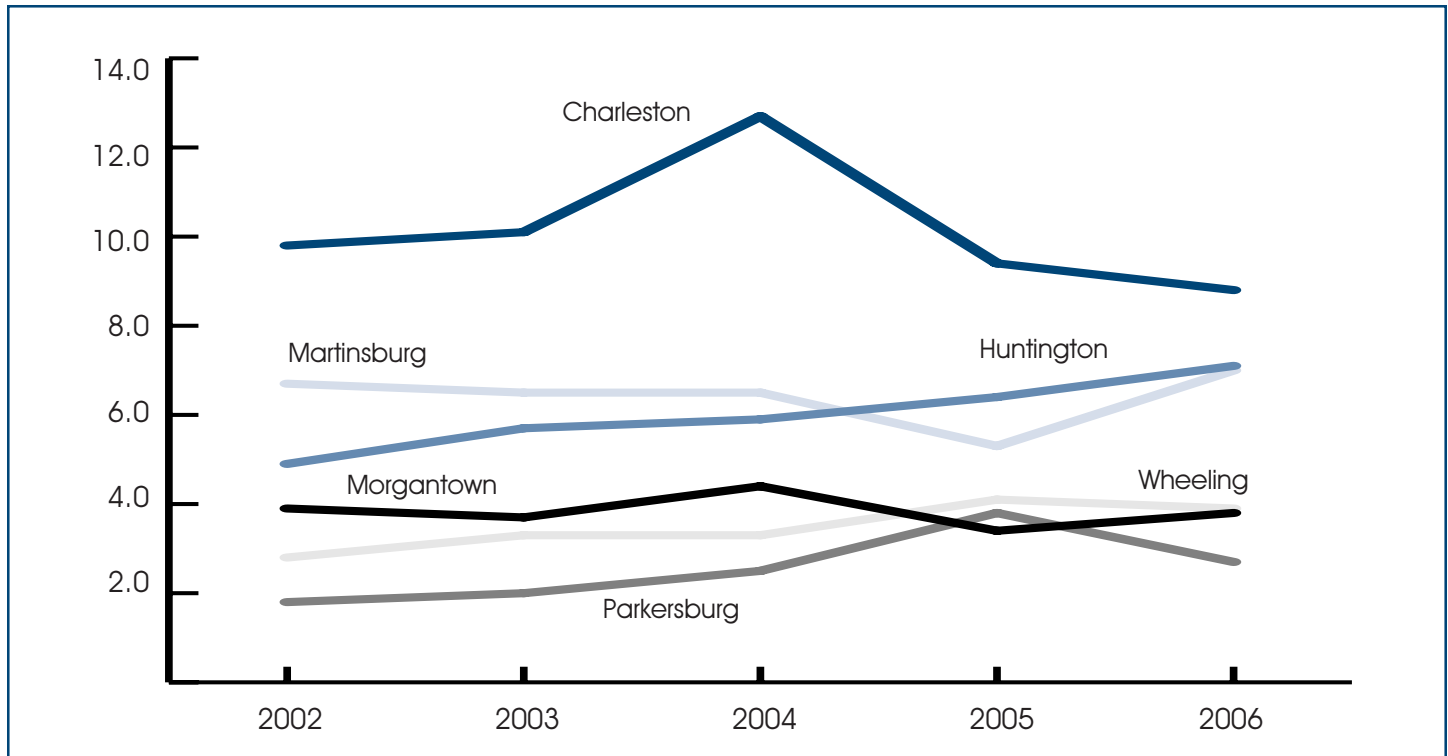
Huntington's crime rate also experienced considerable growth from 114.3 in 2002 to 139.4 in 2006. In Morgantown, the crime rate fell in 2003 but then steadily rose for the remainder of the period. The crime rate in 2006 at 89.4 was just above the level seen in 2002 at 88.7 per 1,000 residents.

Violent crime rates varied considerably across these six cities ranging from a high of 8.8 in Charleston to a low of 2.7 in Parkersburg in 2006. Charleston, Huntington, and Martinsburg consistently had higher

Table 3
Trends in Crime Rates for Principal Cities, 2002-2006

	2002		2003		2004		2005		2006	
	#	Rate	#	Rate	#	Rate	#	Rate	#	Rate
Charleston	8,298	160.0	7,412	143.2	8,738	169.3	8,036	157.0	7,583	149.1
Violent Crime	507	9.8	525	10.1	654	12.7	480	9.4	447	8.8
Property Crime	4,067	78.4	3,498	67.6	4,172	80.8	3,980	77.7	3,634	71.5
Nonindex	3,724	71.8	3,389	65.5	3,912	75.8	3,576	69.8	3,502	68.9
Huntington	5,753	114.3	6,819	136.2	6,886	138.5	6,955	141.2	6,833	139.4
Violent Crime	245	4.9	286	5.7	295	5.9	316	6.4	348	7.1
Property Crime	2,997	59.6	3,682	73.5	3,538	71.2	3,689	74.9	3,842	78.4
Nonindex	2,511	49.9	2,851	56.9	3,053	61.4	2,950	59.9	2,643	53.9
Martinsburg	2,141	140.8	2,020	131.3	1,885	120.7	1,728	108.1	1,920	117.1
Violent Crime	102	6.7	100	6.5	101	6.5	85	5.3	114	7.0
Property Crime	1,095	72.0	1,122	72.9	1,020	65.3	989	61.9	909	55.5
Nonindex	944	62.1	798	51.9	764	48.9	654	40.9	897	54.7
Morgantown	2,435	88.7	1,882	67.3	2,027	72.0	2,507	87.6	2,561	89.4
Violent Crime	106	3.9	104	3.7	123	4.4	98	3.4	108	3.8
Property Crime	1,003	36.6	827	29.6	837	29.7	1,094	38.2	1,028	35.9
Nonindex	1,326	48.3	951	34.0	1,067	37.9	1,315	46.0	1,425	49.7
Parkersburg	2,433	74.5	2,471	76.3	2,903	90.3	3,663	114.4	3,635	114.5
Violent Crime	58	1.8	66	2.0	80	2.5	123	3.8	87	2.7
Property Crime	1,089	33.3	1,194	36.9	1,262	39.3	1,681	52.5	1,746	55.0
Nonindex	1,286	39.4	1,211	37.4	1,561	48.6	1,859	58.1	1802	56.7
Wheeling	2,843	93.2	2,567	85.4	2,488	83.4	2,602	87.9	2,569	87.6
Violent Crime	84	2.8	100	3.3	98	3.3	121	4.1	115	3.9
Property Crime	1,056	34.6	1,027	34.2	1,010	33.9	975	33.0	1,010	34.4
Nonindex	1,703	55.8	1,440	47.9	1,380	46.3	1,506	50.9	1,444	49.2
<i>Note: Rates shown are per 1,000 residents.</i>										

Graph 4
Violent Crime Rates per 1,000 Residents in Principal Cities, 2002-2006



violent crime rates than Morgantown, Parkersburg, and Wheeling during this period.

Graph 4 illustrates the trend in violent crime rates for each of the principal cities between 2002 and 2006. In Charleston, the violent crime rate in 2006 at 8.8 per 1,000 residents was lower than the rate of 9.8 in 2002. Meanwhile, the violent crime rate in Morgantown was nearly unchanged from 3.9 in 2002 to 3.8 in 2006.

The remaining four cities all had higher violent crime rates in 2006 than in 2002. Huntington saw the greatest increase in violent crime rates from 4.9 in 2002 to 7.1 in 2006. Violent crime rates were also on the rise in Parkersburg and Wheeling through 2005 prior to dropping slightly in 2006 to 2.7 and 3.9, respectively. Both Parkersburg and Wheeling, however, finished the period with rates above

those seen in 2002. This trend was reversed for Martinsburg during this period. In Martinsburg, the violent crime rate declined to a low of 5.3 in 2005 before increasing to 7.0 in 2006.

An even greater distinction can be seen in terms property crime rates across the principal cities (see Graph 5). Again Charleston, Huntington, and Martinsburg had consistently higher rates of property crime than Morgantown, Parkersburg, and Wheeling. In 2006, property crime rates ranged from a high of 78.4 in Huntington to a low of 34.4 in Wheeling.

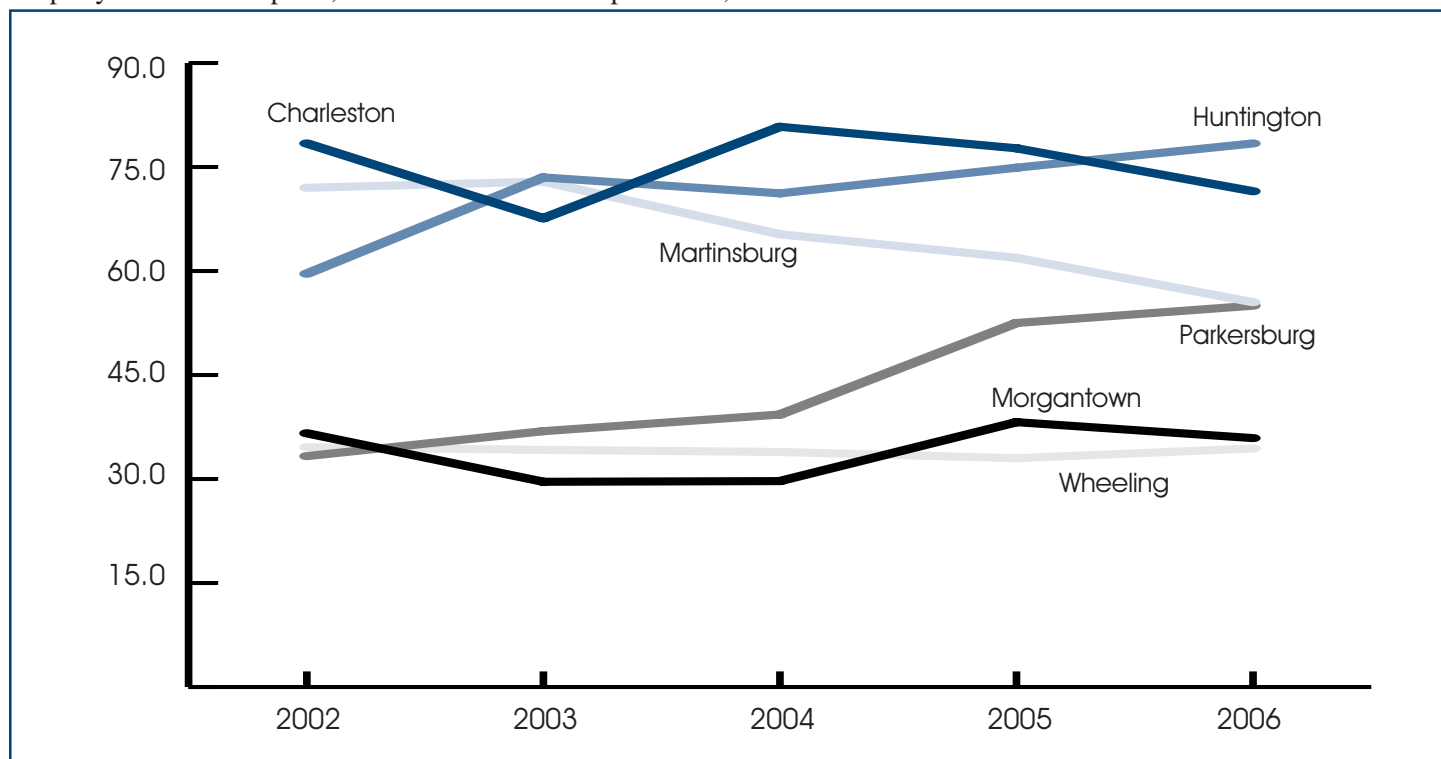
As illustrated in Graph 5, Martinsburg experienced the greatest declines in property crime rates falling from 72.0 in 2002 to 55.5 in 2006. After an increase in 2004, Charleston also ended the period with a lower property crime rate compared to 2002. In 2006,

Charleston had a property crime rate of 71.5 per 1,000 residents compared to 78.4 in 2002.

Property crime rates in Morgantown were also down during most of the period and were slightly lower in 2006 (35.9) than 2002 (36.6). Wheeling experienced the most stable property crime rates during this 5-year period. An average of 34 property crimes per 1,000 Wheeling residents were reported each year.

Conversely, rates of property crime in Huntington and Parkersburg were on the rise between 2002 and 2006. In Huntington, property crime rates increased from 59.6 in 2002 to 78.4 in 2006. By 2006, the city of Huntington had the highest property crime rate of all six principal cities. Likewise, Parkersburg's property crime rate steadily rose each year, from a rate of 33.3 in 2002 to 55.0 in 2006.

Graph 5
Property Crime Rates per 1,000 Residents in Principal Cities, 2002-2006



Victim-Offender Relationships by Population Group

This section examines the relationships between victims and offenders by population group. In particular, we are interested in determining whether the proportion of victims of domestic and nondomestic offenses reported by law enforcement vary by population group. For the following analyses, victims with a known relationship to their offender are divided into domestic and nondomestic categories.

Statewide, over one-half or 55.7% of victims known to law enforcement in 2006 had a domestic relationship with their offender. As a result, most of the population groups shown in Graph 6 had a greater proportion of domestic victims reported by law enforcement agencies. In particular, metro county and nonmetro county law enforcement agencies reported a disproportionately

high number of cases that involved a domestic relationship.

Nearly two-thirds of victims reported by county and state level law enforcement were domestically related to their offender in 2006. As shown in Graph 6, metro and nonmetro county law enforcement agencies reported that 62.4% and 61.7% of victims had domestic relationships with their offender, respectively. As a result, the percentage of domestic victims reported by these agencies clearly exceeded the proportion of domestic victims reported by agencies in the other population groups.

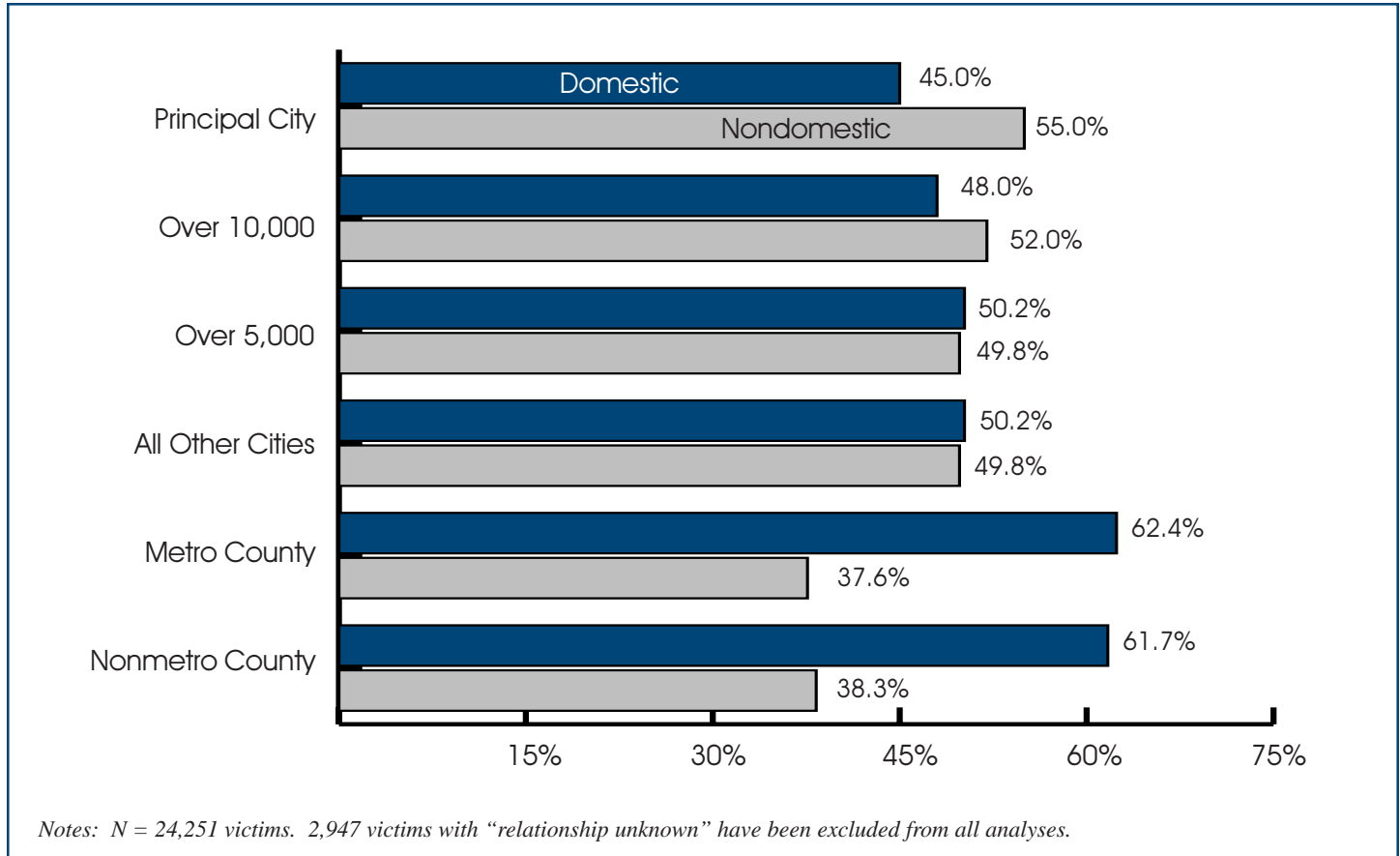
In fact, victims in small cities were about equally likely to have a domestic relationship with their offender as not. In cities with a population between 5,000 and 9,999 as well as cities with under 5,000 residents, only about one-half (50.2%) of victims had a domestic relationship with their offender.

As city population increased, however, law enforcement agencies were more likely to report victims as having a nondomestic relationship with their offender. Of all population groups, only principal cities and other cities with a population greater than 10,000 had a greater proportion of victims that were *not* domestically related to their offender. As shown in Graph 6, 55.0% of victims in principal cities had a nondomestic relationship with their offender. In mid-size cities (i.e., cities over 10,000 population), 52.0% of victims did not have a domestic relationship with their offender.

Table 4 provides further insight into victim-offender relationships by examining violent crime and all other person type offenses (e.g., simple assault, forcible fondling, and kidnapping) separately. Based on the results presented in Table 4, it is clear that victims of violent crime in 2006

Graph 6

Distribution of Domestic and Nondomestic Victims by Population Group, 2006



were more likely to have a nondomestic relationship with their offender at the state level. Nearly two-thirds of all victims of violent crime (62.2%) were in a nondomestic relationship with their offender. On the other hand, victims of other personal offenses were more likely to be domestically related to their offender (58.9%).

In all population groups (except the metro counties), more violent crime victims had a nondomestic relationship with their offender in 2006. This was particularly true in the principal cities where only 23.6% of victims were domestically related to their offender. The variation within these six cities ranged from as few as 10.0% in Morgantown and Huntington to as many as 40.0% in Martinsburg having domestic relationships.

In the remaining city groups, the proportion of domestic violent crime victims varied inversely with population size. Like in the principal cities, only about one-quarter of victims in cities with over 10,000 population had a domestic relationship with their offender. However, in the smaller cities closer to one-third of violent crime victims were domestically related to their offender.

In the nonmetro counties, the majority of violent crime victims (56.6%) were not domestically related to their offender. However, in metro counties just over one-half of all victims (51.2%) were in a domestic relationship with their offender.

The pattern observed in "other person offenses" was just the opposite

of that seen with violent crimes. Across all population groups, a greater percentage of other person offense victims had a domestic relationship with their offender in 2006.

In the principal cities, victims of other person offenses were nearly equally likely to be domestic (50.1%) as nondomestic (49.9%). However, the proportion of domestic and nondomestic victims was somewhat divided across the six principal cities. In Martinsburg, Parkersburg, and Wheeling nearly 60.0% of victims of other person offenses were domestically related to their offender. On the contrary, the majority of victims were not domestically related to their offender in the cities of Charleston, Huntington, and Morgantown.

In the remaining three city population groups, victims of other person offenses were only slightly more likely to be domestically related to their offender. Just over fifty percent of victims in each of these population groups were in a domestic relationship with their offender. At the county level, however, domestic victims in both metro and nonmetro counties accounted for about 65.0% of all victims in 2006.

Graph 7 provides a more detailed breakdown of the victim-offender relationships observed in the principal cities in 2006. Acquaintance type relationships were reported most frequently in these cities as a whole (35.7%). Yet, this varies somewhat

from statewide reports which indicate that intimate partner relationships (36.9%) are more frequently reported than acquaintances (32.7%). In the principal cities, 33.2% of victims reported an intimate partner relationship with their offender.

Stranger victimizations are also more prevalent in the principal city group (18.9%) than in the state as a whole (11.3%). Other familial relationships are, however, reported more frequently for the state (18.8%) than in the principal cities (11.8%).

Some variation can also be seen between the reported relationships in each of the six principal cities (see Graph 7). For instance, 46.9% of

victims in Huntington had an acquaintance type relationship with their offender. In Morgantown, 39.4% were victimized by a stranger. These nondomestic relationships may be attributed to the university populations in each of these cities. Stranger victimizations are also fairly high in Charleston (26.5%) compared to the remaining cities. Likewise, victimizations by acquaintances were somewhat higher in Martinsburg (39.0%).

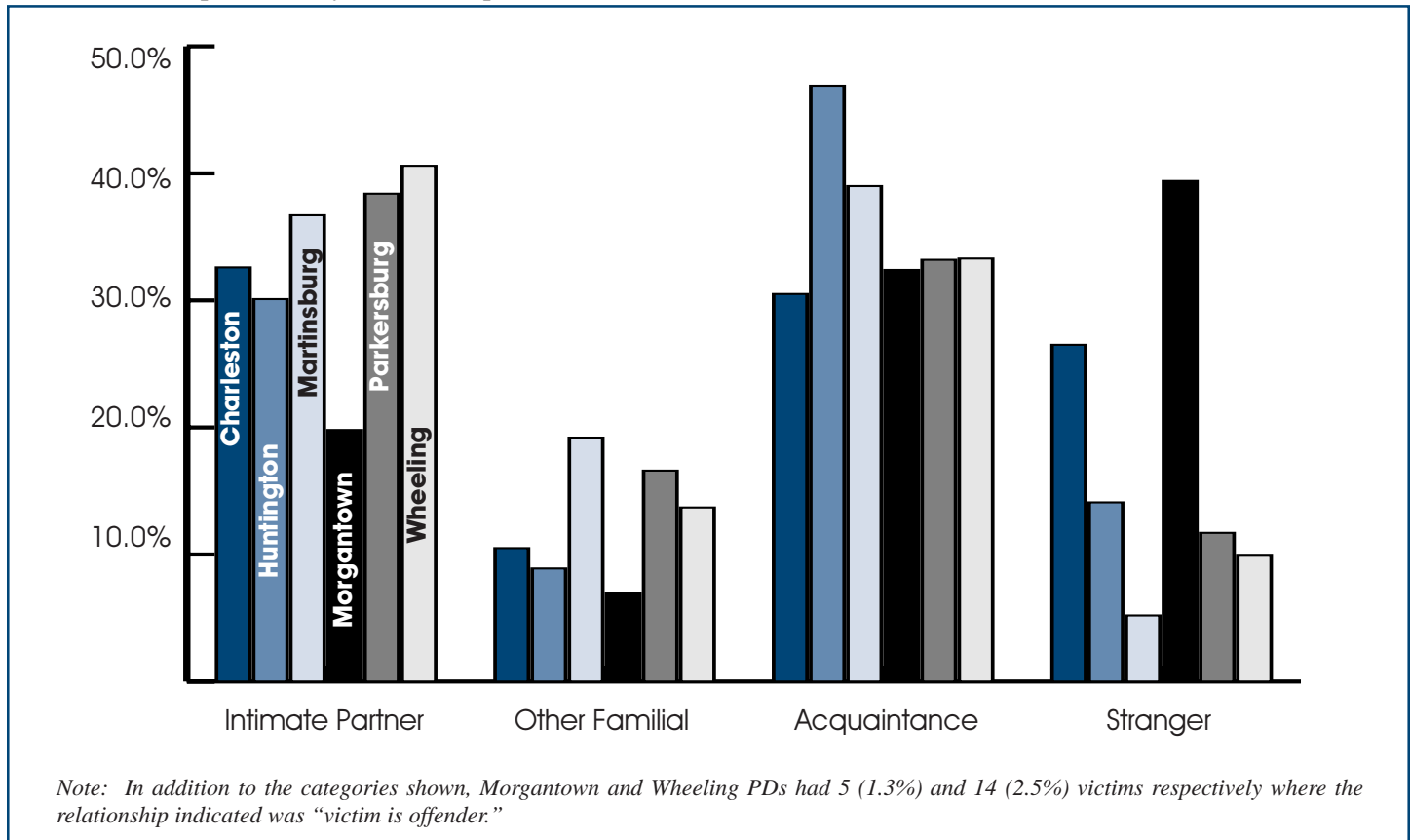
Of the two domestic relationship subcategories, intimate partner victimizations were much more frequent than victimizations by other family members. Intimate partner relationships

Table 4
Crime Victims by Relationship to Offender, 2006

	Total #	Violent Crime		Total #	Other Person Offenses	
		Domestic # (%)	Nondomestic # (%)		Domestic # (%)	Nondomestic # (%)
Principal City	978	231 (23.6%)	747 (76.4%)	4,132	2,069 (50.1%)	2,063 (49.9%)
Charleston	445	137 (30.8%)	308 (69.2%)	1,367	643 (47.0%)	724 (53.0%)
Huntington	232	24 (10.3%)	208 (89.7%)	927	428 (46.2%)	499 (53.8%)
Martinsburg	72	29 (40.3%)	43 (59.7%)	277	166 (59.9%)	111 (40.1%)
Morgantown	89	9 (10.1%)	80 (89.9%)	294	94 (32.0%)	200 (68.0%)
Parkersburg	64	9 (14.1%)	55 (85.9%)	779	455 (58.4%)	324 (41.6%)
Wheeling	76	23 (30.3%)	53 (69.7%)	488	283 (58.0%)	205 (42.0%)
Over 10,000	314	78 (24.8%)	236 (75.2%)	2,185	1,121 (51.3%)	1,064 (48.7%)
Over 5,000	181	59 (32.6%)	122 (67.4%)	1,032	550 (53.3%)	482 (46.7%)
All Other Cities	186	64 (34.4%)	122 (65.6%)	1,295	679 (52.4%)	616 (47.6%)
Metro County	1,072	549 (51.2%)	523 (48.8%)	6,563	4,218 (64.3%)	2,345 (35.7%)
Nonmetro County	935	406 (43.4%)	529 (56.6%)	5,378	3,491 (64.9%)	1,887 (35.1%)
Total	3,666	1,387 (37.8%)	2,279 (62.2%)	20,585	12,128 (58.9%)	8,457 (41.1%)

Notes: Only the most serious person offense suffered by the victim is reported. Violent Crime offenses include murder/nonnegligent manslaughter, forcible rape, robbery, and aggravated assault. Other Person Offenses include all nonindex crimes against the person. These offenses include: kidnapping/abduction, sex offenses (e.g., forcible fondling, forcible sodomy, sexual assault with an object, incest, and statutory rape), and other assaults (e.g., simple assault and intimidation). Percents may not total to 100.0% due to rounding.

Graph 7
Victims in Principal Cities by Relationship to Offender, 2006



represented between 30.0% and 40% of victimizations in each of the principal cities, except Morgantown. In Morgantown, only 19.8% of victims reported an intimate partner relationship with their offender. The greatest proportion of intimate partner victimizations was reported in Wheeling at 40.6%.

Other familial relationships were the least frequently reported across all of the principal cities. The proportion varied from a low of 7.0% in Morgantown to 19.2% in Martinsburg.

Methodology

All data utilized in this report are WV Incident-Based Reporting System (WVIBRS) data obtained from the state repository. The state repository is housed and maintained by the WV State Police Uniform Crime Reporting (UCR) Section. WV was the sixteenth state to become IBRS certified in September 1998 and began only accepting data in the IBRS format as of January 1, 1999.

The transition is an ongoing process. Before local agencies are allowed to begin submitting IBRS data to the state repository and the FBI, they must demonstrate the ability to meet both NIBRS and WVIBRS reporting requirements. While some smaller county and local law enforcement agencies are not yet reporting, WV is considered a full reporting state with

100% of the population covered by reporting agencies. All state police agencies are reporting WVIBRS data.

The SAC receives statewide WVIBRS data directly from the state repository compiled by the UCR staff. The data are extracted in text delimited flat files based on incident date for each calendar year. The SAC currently receives the data extractions in April of each year. Each extraction contains all incidents reported to law enforcement during the previous calendar year.

For the purposes of this report, however, data files were obtained in July 2007 for calendar years 2002 to 2005 due to missing data for one of the principal cities in previously obtained files. Calendar year 2006 data were obtained in April 2007 and did not have the missing data issue.

The text delimited flat files are imported into SPSS and segmented for analysis using syntax files. Once the data are imported into SPSS, the SAC staff work with the UCR section as well as the repository software vendor to ensure the completeness and accuracy of the data. The SAC typically maintains the finalized SPSS static calendar year data files for future analysis and reporting.

Identification and Classification of Population Groups

For this report, population groups were first established based on the Metropolitan Statistical Areas (MSAs) defined in *Crime in the United States, 2005*. MSAs contain a principal city or urbanized area of at least 50,000 people and include the principal city, the county in which it is located, and other adjacent counties having economic and social ties to the principal city and county. West Virginia counties, and therefore agencies within them, were categorized as either metro (included in an MSA) or nonmetro (outside of an MSA).

Nineteen of WV's counties were included in an MSA (see Definitions section for list of counties). Agency ORI numbers were used to determine the reporting county and agency name for each offense/victim. Agencies were then assigned to the appropriate population group.

The population group designated as "principal cities" in this report represents the six largest cities in WV that were also located within a MSA.² Thus, all principal cities are by definition located in a metro county. This report analyzed differences in reported crimes across all population groups, including metro and nonmetro

counties as well as within the six principal cities.

Once the six principal cities were identified using the criteria described above, the remaining municipal police departments were grouped into three distinct population groups. These population groups were as follows: municipal police departments in cities with a population 10,000 or more residents, cities with a population between 5,000 to 9,999 residents, and all other cities with a population under 5,000. These cities may be located in either a metro or nonmetro county.

All county and state level law enforcement agencies were divided into two groups based on county of jurisdiction. These agencies comprise the county level population groups referred to as metro county and nonmetro county.

Crime Counts and Calculations

The WVIBRS is organized into various segments, including a victim segment, offense segment, and arrest segment. This report utilized data gathered in both the offense and victim segments of the WVIBRS.

To make comparisons across crime types and population groups, offenses were generally collapsed into three broad categories for analysis—violent crime, property crime, and nonindex crime. All offenses reported in multiple-offense incidents were counted. In the victim segment, the victim's most serious person offense was determined and categorized as either a violent crime or an "other person offense".

To generate valid national comparisons, WV offense data was also analyzed using traditional UCR counting. The calculation of both

national and WV crime rates are based on methods of counting developed by the FBI. In particular, the counts presented in this section adhere to the "hierarchy rule" used by the FBI in their annual publication, *Crime in the United States*. The hierarchy rule requires that only the most serious offense in a multiple-offense incident is counted.

In addition, this rule identifies a hierarchy of crimes based on seriousness or severity. Violent crimes are deemed more serious than property crimes. Likewise, each crime is ordered in terms of seriousness within the violent and property crime groups. In descending order of severity, crimes are ordered as follows: violent crimes (murder/nonnegligent manslaughter, forcible rape, robbery, and aggravated assault); property crimes (burglary, larceny-theft, and motor vehicle theft). The hierarchy rule does not apply to the offense of arson and it is not included in the calculation of property crime totals for the purpose of making national comparisons.

Definitions

Metro and Nonmetro Counties: Metro counties include: Berkeley, Boone, Cabell, Clay, Hampshire, Jefferson, Kanawha, Lincoln, Marshall, Mineral, Monongalia, Morgan, Ohio, Pleasants, Preston, Putnam, Wayne, Wirt, and Wood. Nonmetro counties are comprised of the remaining 36 WV counties.

Violent Crime: The offenses of murder/nonnegligent manslaughter, forcible rape, robbery, and aggravated assault.

Property Crime: The offenses of burglary/breaking and entering, motor vehicle theft, larceny-theft, and arson.

Nonindex Crime: The remaining Group A offenses defined by NIBRS which are not included in the violent or property crime categories. Nonindex offenses include: assault offenses, bribery, counterfeiting/forgery, destruction of property, drug offenses, embezzlement, extortion/blackmail, fraud offenses, gambling offenses, kidnapping/abduction, pornography, prostitution offenses, sex offenses, stolen property offenses, and weapon law violations.

Domestic and Nondomestic Crime Victims:

NIBRS contains information on the relationship between victims and offenders in all reported cases. This information is used to designate incidents as being either domestic or nondomestic. The victims are categorized as follows:

Domestic: The victim is known to have a relationship with the offender and that relationship is defined as intimate or familial. Intimate relationships include: spouse, estranged spouse, cohabitating partner, intimate partner, boyfriend/girlfriend, and homosexual partner. Familial relationships include: parent, child,

child of an intimate partner, sibling, grandparent, grandchild, in-law, step parent, step child, step sibling, other family member, and other household member.

Nondomestic: The offender is an acquaintance or a stranger to the victim or the victim was the offender. Acquaintance relationships include: acquaintance, friend, neighbor, babysittee, child of boyfriend/girlfriend, employee, employer, and otherwise known.

Population Estimates

Population estimates for WV counties and cities for the years 2002 to 2006 were obtained from the U.S. Census Bureau. Population estimates

Table 5
Census Population Estimates for the Study Groups

	July 1, 2006		July 1, 2005		July 1, 2004		July 1, 2003		July 1, 2002	
	#	(%)	#	(%)	#	(%)	#	(%)	#	(%)
Principal City	205,984	(11.3%)	206,642	(11.4%)	207,060	(11.4%)	207,614	(11.5%)	208,007	(11.5%)
Charleston	50,846	(2.8%)	51,198	(2.8%)	51,608	(2.8%)	51,768	(2.9%)	51,877	(2.9%)
Huntington	49,007	(2.7%)	49,253	(2.7%)	49,716	(2.7%)	50,076	(2.8%)	50,322	(2.8%)
Martinsburg	16,392	(0.9%)	15,980	(0.9%)	15,614	(0.9%)	15,389	(0.9%)	15,203	(0.8%)
Morgantown	28,654	(1.6%)	28,606	(1.6%)	28,143	(1.6%)	27,961	(1.5%)	27,438	(1.5%)
Parkersburg	31,755	(1.7%)	32,016	(1.8%)	32,151	(1.8%)	32,375	(1.8%)	32,656	(1.8%)
Wheeling	29,330	(1.6%)	29,589	(1.6%)	29,828	(1.6%)	30,045	(1.7%)	30,511	(1.7%)
Over 10,000	117,067	(6.4%)	117,623	(6.5%)	118,120	(6.5%)	118,457	(6.5%)	119,081	(6.6%)
Over 5,000	80,162	(4.4%)	80,110	(4.4%)	80,502	(4.4%)	80,574	(4.5%)	80,648	(4.5%)
All Other Cities	201,753	(11.1%)	201,608	(11.1%)	201,602	(11.1%)	202,164	(11.2%)	202,315	(11.2%)
Metro County	598,766	(32.9%)	593,470	(32.7%)	588,521	(32.5%)	583,236	(32.2%)	577,403	(32.0%)
Nonmetro County	614,738	(33.8%)	614,630	(33.9%)	615,101	(34.0%)	616,615	(34.1%)	616,692	(34.2%)
Total	1,818,470		1,814,083		1,810,906		1,808,660		1,804,146	

Note: Percents may not total to 100.0% due to rounding.

were used to calculate all rates shown in this report. Table 5 provides a complete breakdown of the estimates used by population group.

Endnotes

¹ The number of offenses in WV, particularly by crime type, is relatively small. Thus, small changes in these numbers can lead to deceptively large percentage changes from year to year. As a result, it is somewhat difficult to draw comparisons between WV and the US using simple counts or percentage changes based on raw numbers.

In addition it is important to note that WV has no cities that would be characterized as large or even mid-size at a national level. West Virginia's two largest cities have populations of approximately 50,000 residents or less. Thus, a comparison of violent and property crime *rates* in WV and the US is presented in Graphs 1 and 2.

² Based on the methods used to identify the principal cities in this report, the City of Vienna is also identified as being located in an MSA by the FBI. For the purposes of this report, however, we did *not* categorize Vienna as a principal city because of its proximity to and location within the same MSA as Parkersburg, which is designated as a principal city.

Data Sources

West Virginia State Police, Uniform Crime Reporting Section. *West Virginia Incident-Based Reporting System*, 2002-2006. Unpublished raw data.

U.S. Census Bureau, Population Division. *Annual estimates of the population for counties of West Virginia:*

April 1, 2000 to July 1, 2006. Assessed online at: <http://www.census.gov/popest/counties/tables/CO-EST2006-01-54.xls>.

U.S. Census Bureau, Population Division. *Annual estimates of the population for incorporated places in West Virginia:* April 1, 2000 to July 1, 2006. Assessed online at: <http://www.census.gov/popest/cities/tables/SUB-EST2006-04-54.xls>.

References

Balow, J. (2007, January 16). Major crime declines: Murders, malicious woundings, robberies decline in Charleston. *The Charleston Gazette*. Retrieved January 18, 2007, from <http://www.wvgazette.com>.

Johnson, C. (2007, October 4). Violent crime in Huntington rises in 2006. *The Herald-Dispatch*. Retrieved October 4, 2007, from <http://www.herald-dispatch.com>.

Johnson, K. (2006, July 13). Police tie jump in crime to juveniles. *USA Today*. Retrieved June 11, 2007, from <http://www.usatoday.com>.

Federal Bureau of Investigation (2006). *Crime in the United States, 2005*. Washington, DC: Government Printing Office. Available online at: <http://www.fbi.gov/ucr/05cius/>.

Federal Bureau of Investigation (2007). *Crime in the United States, 2006*. Washington, DC: Government Printing Office. Available online at: <http://www.fbi.gov/ucr/06cius/>.

Murr, A. and Jemimah, N. (2007, August 17). Violent crime on the rise in U.S. cities. *Newsweek*. Retrieved August 17, 2007, from <http://www.newsweek.com>.

Pavak, A. and Walters, K. (2007, February 16). No reason to panic over increase in murder rate, expert says. *Carnegie Mellon Today.com*. Retrieved September 14, 2007, from <http://www.carnegiemellontoday.com>.

Police Executive Research Forum. (2006, October). *Chief Concerns: A Gathering Storm—Violent Crime in America*. Retrieved February 16, 2007, from <http://www.policeforum.org>.

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