Trends in the Lethality of Crime

What You Need to Know

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After falling for nearly two decades, homicide rates rose abruptly in 2015 and 2016, declined for a period thereafter, and surged again in 2020, amounting to the largest single-year increase in homicide in the United States in more than five decades.[1] During these two homicide increases, rates of minor forms of violence unexpectedly remained stable or declined.[2] On the surface, it appears that America had become deadlier but not necessarily more violent.

Building on recent criminological research,[3] this brief examines trends from 1994 to 2020 in the lethality of violence, measured by the ratio of fatal to nonfatal violent incidents. This brief complements a companion report on lethality trends in 17 U.S. cities.

Key Takeaways

- After following a similar downward trend through the 1990s, **nonfatal and fatal violent crime began declining at different rates in 2000**. From 1999 to 2014, the drop in nonfatal violence rates was about twice as large as the decrease in homicide rates. This pattern persisted during the homicide spikes of 2015-2016 and 2020, when **nonfatal violence rates continued to fall**.
- The lethality of violence (the ratio of fatal to nonfatal violent incidents) steadily increased beginning in the early 2000s and peaked in 2020, the last year of the study period. **Lethality in 2020 was about 3.6 times higher than in 1994** and nearly double (95.3% higher) the level in 2019.

- **Trends in the lethality of violence were varied across sociodemographic groups**. Increases in lethality affected all people under 50 years old. But lethality for those between age 14 and 17 was nearly 14 times higher in 2020 than in 1999, while it decreased 52% for those ages 65 or older. Lethality increased at similar rates for both Black and White victims and males and females.
- **Violent incidents involving a gun have increasingly resulted in killings over time**. In 2020, firearm lethality **was 5 times higher** than it was in 1994; non-firearm lethality was 2.7 times higher.
- **Rising lethality may be driven by the growing presence of firearms in public life and by increases in the lethal capacity of guns**, including the availability of high-caliber weapons, higher-capacity magazines, and rapid-fire capabilities that make violent encounters more likely to be deadly.

Glossary

- **Assault:** Self-reported victimizations including threatened assaults with a weapon, simple assaults with injury, assaults without a weapon and without injury, and verbal threats of assault.
- **Robbery:** Self-reported victimizations including completed and attempted robberies with or without injury.
- **Nonfatal violence:** Self-reported assaults and robberies not ending in death.
- **Lethality ratio:** The number of homicides per 1,000 assaults or per 1,000 robberies. For example, an assault lethality ratio of 5.0 means 5 homicides per 1,000 assaults.
- **National Crime Victimization Survey (NCVS)**: A survey developed by the Bureau of Justice Statistics and conducted annually by the Census Bureau, serving as the primary national data source on criminal victimization. The survey collects information from approximately 240,000 individuals in 150,000 U.S. households, representative of the nation's demographics. Participants, aged 12 and above (excluding those homeless or in correctional facilities), are interviewed about their experiences with criminal victimization, including frequency, types, and impacts. Data cover nonfatal personal crimes (e.g., assault, robbery, sexual assault) and household property crimes (e.g., burglary, motor vehicle theft), along with reporting to law enforcement.
- **Supplementary Homicide Report (SHR):** The Supplementary Homicide Report is a

supplement to the Federal Bureau of Investigation's Uniform Crime Reporting program. The SHR database includes counts of murders and nonnegligent manslaughters reported to law enforcement agencies in the U.S. since 1976.

Introduction

The general decline in violence from the early 1990s through 2019, as well as more recent violent crime trends since the emergence of the COVID-19 pandemic and social unrest during 2020, has been well documented. But examining general violent crime trends provides an incomplete picture of fatal violence. To better illuminate the risk of death (i.e., lethality) during a violent encounter, this report merges data from two U.S. Department of Justice databases: nonfatal victimizations from the Bureau of Justice Statistics' National Crime Victimization Survey (NCVS) and fatal victimizations from the FBI's Supplementary Homicide Report (SHR) database.[4] Following previous research, these two data sources were used because together they provide annual, nationally representative samples of fatal and nonfatal violence.[5] This analysis focuses on the period from 1994 to 2020, which marks the last year the SHR data was available before the nationwide transition to the National Incident-Based Reporting System (NIBRS).

The brief unfolds in three overlapping parts. The first examines trends in assault, robbery, and homicide rates focusing on their divergence and convergence. The second part examines trends in estimates of lethality for robbery and assault within the general population, as well as trends by sex, race, age, and firearm involvement. The third part shows the change in the likelihood of incidents becoming fatal in the presence of a gun.

Trends in violent crime and lethality, 1994-2020

Figure 1 shows trends in nonfatal and fatal violent crime rates from 1994 to 2020. The figure contains two rates. The first is the conventional rate per 100,000 people, and the other is a scaled rate to adjust for large differences in the number of fatal and nonfatal violent offenses. The scaled rates presented here are adjusted so that trends can be compared more easily across homicides (per 100,000 people), robberies (per 1,500 people), and assaults (per 200 people).

From 1994 to 1999, rates of all three types of violent crime declined similarly—assault by

41.2% (5,274 to 3,097 per 100,000 people), robbery by 37.2% (671 to 422), and homicide by 37.1% (10.5 to 6.6). From 1999 to 2014, assault and robbery rates continued to decline, dropping by 59.9% (3,097 to 1,241) and 47.2% (422 to 223), respectively. The homicide rate, however, declined by far less—24.1%, from 6.6 to 5.0. This was the first period in the study timeframe during which the nonfatal and fatal crime rate trends followed a markedly different pattern.

From 2014 to 2020, despite periodic increases, nonfatal violent crime rates remained lower than during the previous two decades. The assault rate ranged between a low of 886 in 2015 and a high of 1,522 in 2018 (73.4% higher). The robbery rate during this period ranged from a high of 227 in 2017 and a low of 134 in 2020 (40% lower). The homicide rate, however, followed a trend opposite that seen for robbery, increasing by 48.5% from 5.0 in 2014 to 7.5 in 2020. From 2019 to 2020, the assault and robbery rates decreased by 24.5% and 33.6%, respectively, while the homicide rate increased by 29.6%.

Although there were increases in some years, assault, robbery, and homicide all were lower in 2020 than in 1994. Over this period, the assault rate was 80.2% lower, the robbery rate was 80.0% lower, and the homicide rate was 29.1% lower.

Figure 1. Assault, Robbery, and Homicide Rates, 1994–2020

Lethality has increased since the early 2000s and peaked in 2020

Figure 2 shows the trends in lethality from 1994 to 2020 for both assault incidents and robberies. Lethality ratios are calculated by dividing the number of homicides by the number of nonfatal violent incidents and then multiplying that sum by 1,000. Higher lethality ratios indicate that violent incidents were more deadly during that year. In 1994, the assault lethality ratio was 2.0, meaning there were two homicides per 1,000 assaults. The assault lethality ratio remained around 2.0 throughout the late 1990s. The assault lethality ratio was 89% higher in 2014 than in 1999, increasing from 2.1 homicides per 1,000 assaults to 4.1 homicides per 1,000 assaults. In 2020, assault lethality reached its highest level—7.2 homicides per 1,000 assaults. This ratio was 77% higher than in 2014 and 258% higher than in 1994. Put differently, assaults in 2020 were about 3.6 times deadlier than in 1994. Much of that increase occurred in 2020: The assault lethality ratio that year was almost double (95.3% higher) the level in 2019.

Robbery lethality showed similar trends. In 1994, the robbery lethality ratio was 15.7, meaning there were about 16 homicides per 1,000 robberies. The robbery lethality ratio generally remained stable from 1994 to 1999. From 2000 to 2014, however, levels of robbery lethality seesawed, ranging between a low of 19.2 in 2005 and high of 27.3 in 2009. Robbery lethality continued to climb after 2014, increasing from 22.6 that year to 37.9 in 2015, a 68% increase, and rising again from 28.6 in 2019 to 55.8 in 2020, a 95% increase. In 2020, robbery lethality was 3.6 times higher than in 1994.

Across both assaults and robberies, lethality ratios were higher in 2020 than in 1994. With some exceptions, the trends demonstrate a pattern of growing lethality in the past three decades.

Figure 2. Assault and Robbery Lethality Rates, 1994–2020

Lethality by Sex, Race, and Age

Males experience higher rates of lethality, though trends are similar between the sexes

Figure 3 displays the assault lethality ratios by victim sex. Male lethality (meaning a male is the victim) is higher than female lethality during the study period. In 1994, male lethality was 2.9 homicides per 1,000 assaults—approximately three times higher than female lethality (0.9). In 2015, male lethality was 6.7 times higher than female lethality, and in 2020, it was 4.5 times higher. The lethality of robbery was similar for males and females, and followed similar trends over time. Therefore, this section focuses on assault lethality.

Male and female lethality ratios for assaults generally remained stable in the 1990s and began to increase in the early 2000s. Male lethality increased relatively steadily from 3.1 in 1999 to 6.1 in 2019, a 95% increase. The increase was punctuated by a large spike in lethality in 2015, when the ratio reached a high of 13.1—a 99% increase from 2014. The trend reversed the following year, when lethality dropped 29%, to 9.4. Between 2019 and 2020, male lethality increased by 90%, rising from 6.1 to 11.6. In 2020, male lethality was 4.1 times higher than it was in 1994.

Female lethality was 71% higher in 2019 than in 1999, increasing from 1.0 to 1.8 over the period. In contrast to the pattern for males, female lethality did not spike in 2015, rising only

slightly, to 1.95. From 2019 to 2020, female lethality increased 44.5%, from 1.8 to 2.6. By 2020, it was 2.8 times higher than in 1994.

Figure 3. Assault Lethality Ratios, by Victim Sex, 1994–2020

Lethality is higher for Black victims, though trends are similar for Black and White people

Figure 4 breaks down assault lethality by the race of the victim. Lethality for Black victims was higher than it was for White victims across all years in the study period. In 1994, Black lethality was 9.9 homicides per 1,000 assaults, a level about nine times higher than it was for White victims (1.1). The Black-White gap in lethality remained mostly stable from 1994 to 2020.

Both Black and White lethality have increased since the early 2000s. Black lethality was 65% higher in 2014 than in 1999, increasing from 8.8 to 14.5. Black lethality increased by 64% from 2014 to 2015 and remained elevated. In 2020, Black lethality reached its highest level, 28.9—a 32% increase from 2019. Black lethality was 2.9 times higher in 2020 than it was in 1994.

White lethality was 92% higher in 2014 than in 1999, increasing from 1.2 to 2.4. White lethality spiked by 60% from 2014 to 2015 and increased by 67% from 2019 to 2020. In 2020, White lethality was 3.4 times higher than it was in 1994.

Figure 4. Assault Lethality Ratios, by Victim Race, 1994–2020

Lethality by age group has changed over time, with teens experiencing the highest rates among all victims in 2020

Figure 5 displays assault lethality ratios by victim age. For most age groups, lethality remained relatively stable in the 1990s. But since 1999, the trends in lethality varied across victim age group.

Lethality trends for age groups 14 to 17, 18 to 24, 25 to 34, and 35 to 49 showed steady

increases from 1999 to 2020. Compared to 1999, lethality in 2020 was 1,270% higher (0.8 to 10.7) for the 14 to 17 age group, 306% higher for the 18 to 24 age group (2.6 to 10.4), 286% higher for the 25 to 34 age group (2.5 to 9.7), and 246% higher for the 35 to 49 age group (2.1 to 7.2). There were sharper increases in lethality from 2014 to 2015 and 2019 to 2020. The latter spike was particularly pronounced for the 14 to 17 age group. In 2020, lethality for those victims was higher than it was for all other age groups.

Trends for age groups 50 to 64 and 65 and over do not reveal the same increases in lethality. Among the 50 to 64 age group, lethality was 28% higher (2.4 to 3.1) in 2020 than in 1994. Among victims 65 and older, lethality was 52% lower during the study period, dropping from 11.4 to 5.5.

The comparatively large increase in lethality for victims aged 14 to 24 aligns with the high homicide rates among this same age group, as well as the higher prevalence of firearm use in homicides. These facts suggest that young people face high homicide risk because their conflicts tend to be deadlier, and not necessarily because they experienced a greater increase in violent conflicts than other groups. It is possible that those in the 14 to 24 age group may be especially vulnerable to changes in social or technological factors that increase deadly escalation. This report does not explore that explanation, but it is an area worthy of more research.

Figure 5. Violence Lethality Ratios, by Victim Age Group, 1994–2020

Firearm lethality was nearly five times higher in 2020 than in 1994

Figure 6 shows the assault lethality ratios by firearm presence. Firearm lethality refers to the number of gun homicides per 1,000 nonfatal violent incidents in which a firearm was present, but not necessarily discharged. Non-firearm lethality refers to the number of non-firearm homicides (e.g., killings with knives or without weapons) per 1,000 nonfatal violent incidents in which a firearm was absent.

Firearm lethality was higher than non-firearm lethality across all years in the study period. In 1994, firearm lethality was 24.2 homicides per 1,000 assaults—40 times higher than non-firearm lethality (0.60). The gap in firearm and non-firearm lethality was larger in the 2010s. In 2015, firearm lethality was 122 times higher than non-firearm lethality, and in 2020, it was

75 times higher.

Firearm lethality was 37% higher in 1999 than in 1994, increasing from 24.2 to 33.2 homicides per 1,000 assaults. By 2014, firearm lethality was 110% higher than in 1999. Between 2014 and 2015, firearm lethality spiked further, from 69.5 to 207.1—a 197% increase. From 2019 to 2020, firearm lethality increased by 128%. In 2020, firearm lethality was five times higher than it was in 1994.

Non-firearm lethality also increased, but at a much slower pace than firearm lethality. Non-firearm lethality was 25% higher in 1999 than in 1994, increasing from 0.60 to 0.75, and was 66% higher in 2014 than in 1999, rising from 0.75 to 1.25. In 2020, non-firearm lethality reached 1.6 homicides per 1,000 assaults—2.7 times higher than it was in 1994.

Figure 6. Assault Lethality Ratios, by Firearm Presence, 1994–2020

Firearm violent incidents have become more lethal

Aggregate trends are instructive for exploratory purposes, but they mask key information about the situational dynamics of violent crime incidents that possibly affect changes in lethality. This section assesses whether the association between firearm presence and the lethality of violent crime incidents has become stronger over three decades, after accounting for victim demographic characteristics in violent crime incidents. This was accomplished by combining the NCVS and SHR findings into one pooled dataset. Please see the supplemental methodology report for details.

Figure 7 illustrates how the presence of a gun during a violent incident (robbery and assault) changes the probability of death at each year after adjusting for victims' sex, race, and age. More specifically, the figure shows how the lethal effects of firearms have changed over time after adjusting for possible differences in the characteristics of violent incidents. Even after adjusting for changes in victim demographics, the effect of a firearm on the probability of death during a violent incident increased during the study period. In 1994, the share of incidents expected to end in death increased by 1.2 percentage points when a firearm was present; by 2020, that share increased by 3.2 percentage points. In other words, in 1994, about one out of 100 violent incidents involving a firearm was expected to end in a death, but by 2020, that increased to three out of 100 incidents.

Figure 7. Firearm Presence on the Likelihood That a Violent Incident Results in a Fatality

Conclusion

The results presented here, analyzing data from 1994 through 2020, show that violent incidents in the U.S. have become increasingly likely to result in a victim's death over time. This surge in lethality is evident across demographic groups but is most pronounced for victims aged 14 to 17. For those young victims, lethality was 1,270% higher in 2020 than it was in 1999. While lethality is higher for males and for Black victims, the analysis shows that trends in lethality are generally similar across sex and race. Examining lethality differences in violent incidents with and without a firearm, the study shows that an episode is more likely to end in death when a gun is involved. Given the spike in homicide rates from 2020 through 2022, it is likely that the lethality trend documented here continued past the study period, before declining in 2023 and 2024.

The growing contribution of firearms to deadly violence appears to be driven by two interrelated developments. First, firearms have become more prevalent in the U.S.[6] This widespread availability may contribute to a perceived need for self-armament, creating a feedback loop or "arms race" in which people acquire guns because they believe others are armed.[7] This dynamic appears to have real consequences: Firearms purchased in 2020 were used in more crimes than the annual average in previous years.[8] In addition, the flow of new firearms into legal markets contributes directly to the stock of firearms in illegal markets.[9] That is, guns that are legally obtained may eventually be illegally sold and acquired by people who may not have the right to lawfully possess a firearm. A second key factor is the advancement of firearm technology, which has increased the lethal potential of commonly available guns. These include higher magazine capacities, more powerful ammunition (e.g., high-caliber pistol rounds), and widespread use of semi-automatic pistols, which largely replaced revolvers beginning in the 1980s and 1990s—contributing to increased fatality rates in shootings.[10] Supporting this trend, emergency room data suggest that gunshot injuries have become more severe over time. [11]

To address rising levels of community violence, particularly lethal violence, local leaders should prioritize and sustain investments in proven, evidence-based violence reduction strategies. These should include both upstream interventions to reduce the circulation and misuse of firearms and downstream programs focused on high-risk individuals and

neighborhoods.

It will be difficult to assess national trends in lethality with the data used here from 2021 onward due to disruptions that have occurred following the transition from the Uniform Crime Reporting Program's Summary Reporting System to NIBRS. Researchers should therefore pursue alternative methods and datasets to continue tracking the lethality of violence in America. One such program is the National Violent Death Reporting System (NVDRS), which contains incident details that are not typically covered by NIBRS, such as detailed weapon information and details on victims' wounds. Due to the limited national coverage of the NVDRS, the data could not be included in this report.

Research is limited by available data, and this is especially true for the study of lethal violence. As noted by the CCJ Crime Trends Working Group, the data infrastructure on gun violence, both fatal and non-fatal, must be improved. While the expansion of NIBRS is a step in the right direction, researchers and policymakers should also explore and invest in other efforts to track violent incidents that leave fatalities in their wake.

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Endnotes

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