WHAT DO THE DATA REVEAL ABOUT VIOLENCE IN SCHOOLS?

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A review of the most commonly cited sources of school safety data indicates that although crime and violence in schools have generally been decreasing for some time, multiple-victim homicide incidents have been increasing.

Marjory Stoneman Douglas High School, Sandy Hook Elementary School, and Santa Fe High School, among others, are now synonymous with a particularly insidious form of violence in our nation — mass violence and school shootings. School shootings like these heighten the perception that schools are dangerous places for youth. Although no amount of school violence is ever acceptable, nationally available data on trends in violence and victimization at school reveal that levels of overall violence declined from 1992 to 2017.[1] How do we reconcile these trends with the pervasive sense that the number of school shootings is increasing and that schools are becoming increasingly dangerous places? This article explores that paradox by reviewing the trends in school violence from the most often cited sources of school safety data. It also discusses how we can explore this paradox further through an NIJ-funded study on school shootings and a federal effort to improve federal data and its implications for school safety.

At this time, there is no single data collection that captures the complete picture of the frequency, incidence, and trends in violent crime[2] in U.S. schools. Rather, government agencies and nongovernmental organizations employ numerous data sources and surveys. Some of this information is presented in *Indicators of School Crime and Safety* (the *Indicators* report), which is published regularly by the U.S. Department of Education's National Center for Education Statistics and the U.S. Department of Justice's Bureau of Justice Statistics. The report establishes reliable indicators of the current state of school crime and safety across the nation and is helpful in tracking specific indicators over time; however, it also contains an amalgamation of information on school safety that is not easily interpreted. This is compounded by the lack of agreed-upon focus and definitions across

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the sources from which the *Indicators* report draws its data, the irregularity of the data collections, the different populations surveyed (e.g., students versus principals), and differences in how questions are phrased.

A review of the most widely used and well-known data sources reveals that incidents of multiple-victim youth homicides in schools started declining in 1994 but have been increasing since 2009.[3] Thus, the public's perception that there is an increased likelihood of a school shooting is grounded in an increase in multiple-victim, school-associated deaths. Despite this increase, however, the rates of violent victimization and serious violent victimization at school are low and have been decreasing since the 1990s. This disconnect raises the question of whether we are collecting the right indicators for understanding trends in school violence.

To help answer this question and improve school safety data collection, NIJ funded researchers to create an open-source database for tracking shootings on K-12 school grounds. This research may help uncover why multiple-victim homicide incidents have been increasing. In addition, in 2019 the Office of Management and Budget released the Federal Data Strategy, which presents an opportunity to examine and rethink the way the federal government collects data on school safety. Both efforts have the potential to help us better understand the nature and extent of violent crime that occurs in schools — and ultimately how best to prevent future incidents.

Understanding the Scope of Violent Crime in Schools

Following is a review of data and current trends in school crime and violence. The data sets included in this review — though by no means an exhaustive list — are perhaps the most widely used and well-known national data sources for violence in schools.

School Crime Supplement to the National Crime Victimization Survey

The School Crime Supplement (SCS) to the National Crime Victimization Survey (NCVS) is sponsored by the Bureau of Justice Statistics and the National Center for Education Statistics. It collects data on alcohol and drug availability, bullying and cyberbullying, disorder and rule enforcement, extracurricular activities, fear and avoidance behaviors, fights, gangs, graffiti, hate words, school characteristics, school security, school transportation, social bonding, and weapons in school. It is a nationally representative household survey. The respondents to the SCS are students ages 12-18 in NCVS households who are enrolled in U.S. public and private elementary, middle, and high schools. Since 1989,[4] student data reported to the SCS have been the primary source of data used to generate national estimates of criminal and bullying victimization in schools and to evaluate differences in the prevalence of victimization over time and among different student groups.[5]

According to the latest SCS data collected in 2017, being the victim of a violent crime at school is rare. About 1% of students surveyed reported experiencing a violent victimization in the six months prior to survey completion and less than 0.5% reported a serious violent victimization.[6] Serious violent victimizations include rape, sexual assault, robbery, and aggravated assault. Violent victimizations include all of the serious violent victimizations as well as simple assault. Between 2001 and 2017, the percentage of students who reported being victimized at school during the six months prior to survey completion decreased for both violent victimizations (from 2% to 1%) and serious violent victimizations (from 1% to less than 0.5%).[7]

Bullying is also a serious concern in schools. Bullying can be verbal (being threatened, called names, or insulted) and physical (being pushed, shoved, tripped, or spit on). Bullying may occur in various ways, including in person and virtually through social media. We know that some school shooters felt bullied, victimized, persecuted, or injured by others prior to their attacks. In some instances, the attacker experienced bullying that was long-standing and severe.[8] According to the SCS, about 5% of students surveyed in 2017 reported being subject to this physical bullying behavior.[9]

Students' fear of being harmed has also decreased in the past few decades.[10] The SCS asks students about their perceptions of safety and fear of attack at school during the school year. Between 2001 and 2017, the percentage of students who reported being afraid of attack or harm at school decreased overall (from 6% to 4%).[11]

School Survey on Crime and Safety

The School Survey on Crime and Safety (SSOCS) is administered by the National Center for Education Statistics and provides school-level data on crime and safety. First administered during the 1999-2000 school year, the SSOCS is a nationally representative, cross-sectional survey of approximately 4,800 public elementary and secondary schools in the United States. It is completed by school principals and other administrators, and provides information on school crime, discipline, disorder, programs, and policies.[12]

Of particular relevance to this review, the SSOCS collects and reports data on two overlapping categories of crime: violent crime and serious violent crime. Violent crime incidents can range from a threat of a physical attack to robbery or to a serious violent incident such as a physical attack, sexual assault, or rape. According to the SSOCS, a subset of violent crime incidents can be categorized as serious violent incidents. A serious violent incident may include rape, sexual assault other than rape, physical attack or fight with a weapon, a threat of physical attack with a weapon, and robbery with or without a weapon.

Although most schools report at least one incident of violent crime per year, the trends for violent crime and serious violent crime in schools have been decreasing. According to the latest available SSOCS data, 71% of schools reported at least one incident of a violent crime during the 2017-2018 school year.[13] This number seems to be decreasing — 66% of public schools recorded physical attacks or fights without a weapon in 2017-2018 compared with 71% in 2009-2010. When serious violent crime is examined as a subset of violent crime, approximately 21% of schools reported at least one serious violent incident at school in 2017-2018.

The SSOCS also asks principals about bullying. In 2009-2010, approximately 30% of schools reported incidents of bullying in the past week. However, in the 2017-2018 survey, only about 14% of schools reported incidents of bullying in the past week.[14]

School-Associated Violent Death Surveillance System

Of all violent crimes, homicides are the most well-documented. The Centers for Disease Control and Prevention (CDC) has been collecting data on school-associated violent deaths since the early 1990s.

The School-Associated Violent Death Surveillance System (SAVD-SS) — sponsored by the U.S. Departments of Education and Justice as well as the CDC — tracks lethal violence (i.e., homicides, suicides, and legal intervention deaths) on school grounds or on the way to and from school. Researchers scan open sources of data, including computerized newspapers and broadcast media databases via LexisNexis, to identify incidents of death related to schools. Their searches use keywords such as "shooting, death, violent, strangulation, beating, attack, stabbing, and died," combined with phrases such as "primary, secondary, elementary, junior, high, middle school."

Once lethal violent incidents (i.e., cases) are identified, researchers apply a four-step verification process that includes the schools and law enforcement agencies involved in investigating the deaths. Copies of law

enforcement reports also help confirm case details and whether the case meets the inclusion criteria. The cases included are ones in which a fatality occurred:

- On a public or private primary or secondary school campus in the United States.

- While the victim was on the way to or from regular sessions at school.

- While the victim was attending or traveling to or from an official school-sponsored event.

In the SAVD-SS, victims include students, staff members, and others.

The trends from July 1994 through June 2016 indicate that on average, school-associated violent deaths accounted for less than 3% of all youth homicides in the United States consistently throughout this time frame.[15] The most recent SAVD-SS data cover the period from July 1, 2015, through June 30, 2016. During this period, there were 38 student, staff, and nonstudent school-associated violent deaths in the United States; 30 of these were homicides, seven were suicides, and one death resulted from legal intervention. During this same period, there were 1,478 youth homicides and 1,941 youth suicides in the United States.

There are differences between single-victim homicide trends and multiple-victim homicide trends. From 1994 to 2016, there were approximately 423 school-associated homicide incidents, including 393 single-victim incidents and about 30 multiple-victim incidents.[16] According to SAVD-SS data, approximately 90% of school-related youth homicide incidents involve a single victim, which is contrary to the perception that most school-related youth homicides occur in the context of a mass shooting. Among homicides with known motives, gang-related activity (58.2%) and interpersonal disputes (44%) were the most common motives for single-victim, school-related homicides, suggesting that these homicides may reflect broader communitywide causes of violence.[17] The proportion of single-victim, school-related homicides hovers around or below 2% of all youth homicides occurring from 1994 to 2016.

The SAVD-SS provides evidence of an increase in the number of multiple-victim homicides in recent years. The homicides associated with multiple-victim incidents increased from June 2009 through the 2017-2018 school year.[18] Although likely related to only eight specific incidents occurring on or after July 2016, this increase has no clear explanations.

Synthesizing the Findings

The data sources examined above indicate that students are not often the victims of violent and serious violent crime in schools. These trends have been decreasing since 2001. Physical bullying victimization has also been on a downward trend since 2009-2010. Schools have reported fewer incidents of violent crime and serious violent crime, and these too have been on a downward trend since 2009-2010. School homicides, in comparison to other youth homicides, are relatively rare, with less than 38 deaths reported from July 2015 to July 2016. These are encouraging findings in the context of understanding trends in school safety.

While these findings give us a great deal of information, there is still much more to understand about school safety. In the midst of these trends pointing to decreases in violent crime, serious violent crime, and bullying in schools, one indicator has been increasing: multiple-victim associated deaths at schools. Single-victim homicide rates have remained relatively stable over time.[19] However, multiple-victim homicide incidents are increasing, and we do not know why.

NIJ's School Shooting Database

To help fill this knowledge gap, NIJ funded a project through its Comprehensive School Safety Initiative to create an open-source database that includes all publicly known school shootings resulting in at least one firearm death or injury that occurred on school grounds in the United States from January 1, 1990, to December 31, 2016. Joshua Freilich at John Jay College, Steven Chermak at Michigan State University, and Nadine Connell, formerly at the University of Texas

at Dallas, are conducting this work. Once completed, the School Shooting Database (SSDB) will be used to document the nature of the problem and clarify the types of shooting incidents that occur in schools. It will also provide a comprehensive understanding of the perpetrators of school shootings; test causal factors to assess whether mass and non-mass school shootings are comparable; and compare fatal and nonfatal shooting incidents to identify intervention points that could be exploited to reduce the harm caused by school shootings.

The method of data collection in this project has been intensive and painstaking. First, the researchers reviewed more than 45 sources, lists, and chronologies that already tracked school violence. This allowed the researchers to create their sample frame for school shootings during the study period. They also reviewed additional listings of specific cases that the media and other accounts of particular events included or referenced. The researchers then contacted organizations that might have a relevant database for information on incidents of school shootings. Through this outreach, they cross-referenced every school shooting incident reported on any currently available database. Second, they searched specific key terms across a series of search engines and media sources to identify additional incidents. For this database, school shootings that resulted in injury (not limited to homicide) and occurred on K-12 school grounds are included. For every incident identified, the researchers then systematically searched more than 20 additional search engines simultaneously looking for relevant data on the incident, the school, the victim(s), and the offender.

Though the SSDB is still in development, researchers to date have identified 660 incidents of school shootings that resulted in injury from 1990 to 2016.[20] Each incident is treated as a case study, and the goal is to collect all of the information available for each incident. To do this, the SSDB team uses a search protocol that includes more than 60 search engines or sites. These include media aggregators, web-based newspaper archives, legal research services,

administrative sources (e.g., state Department of Corrections records, the FBI's National Incident-Based Reporting System and Supplementary Homicide Reports, and local police websites), academic sources, notable incident trackers, people searches and white pages, social media, public records, and criminal and background check services. These searches lead to a trove of public information that includes published interviews (both scholarly and journalistic), obituaries, news articles, biographies, scholarly overviews, and social media. This information is then reviewed to fill in values of hundreds of attributes on the incident, school, offender, and victim levels. The SSDB also captures the reliability of the open source information in numerous ways and has addressed both inter-searcher and inter-rater (inter-coder) reliability issues; in the future, it will empirically investigate selectivity bias. In addition, the researchers will highlight key characteristics for each incident, victim, and perpetrator to help law enforcement and school administrators differentiate between various kinds of school shootings and develop appropriate prevention efforts and responses for individuals and the community. This research has the real potential to help us understand why multiple-victim homicide incidents have been increasing over the last 10 years.

Improving Federal School Safety Data Collections

Recently, the Office of Management and Budget — the federal agency that implements the administration's policy, budget, management, and regulatory objectives — released the "Federal Data Strategy – A Framework for Consistency."[21] This Federal Data Strategy (FDS) uses and manages federal data to best serve the public while getting optimal use from the data and protecting data security and privacy. Its purpose is to guide the federal government in practicing ethical governance, conscious design, and a learning culture.

The FDS describes several principles and practices that should guide the federal government's thinking about data. Several principles are particularly relevant to how the federal government collects, analyzes,

and presents school safety data. For example, the strategy discusses the principle of conscious design, specifically that agencies should "harness existing data … to inform priority research and policy questions; reuse data if possible and acquire additional data if needed."[22]

As discussed in the introduction of this article, there has been an effort across some federal agencies to collect in one place data that inform interested stakeholders regarding school safety: the *Indicators of School Crime and Safety* report. This report, which is updated regularly, establishes reliable indicators of the current state of school crime and safety across the nation. It covers topics such as victimization, teacher injury, bullying and electronic bullying, school conditions, fights, weapons, availability and student use of drugs and alcohol, student perceptions of personal safety at school, and criminal incidents at postsecondary institutions. It is not meant to be an exhaustive compilation of school crime and safety information, nor is it meant to explore the causes of crime and violence in schools.

The indicators reported are based on information drawn from various data sources, including national surveys of students, teachers, principals, and postsecondary institutions. This provides opportunities for analyzing multiple aspects of crime and victimization in schools but also presents its fair share of unique challenges that limit the report's utility. For example, each data source used in the *Indicators* report has an independent sample design, time frame, data collection method, and questionnaire design — or it is the result of a universal data collection. This makes it difficult to compare indicators from one study with similar indicators from another data source. In addition, the time frame between data collections may range from every year to every five years. The *Indicators* report is released every year, and this time-frame issue may result in certain indicators being reported as the same year after year.

Although the *Indicators* report makes a valuable contribution to our overall understanding of school crime and safety, it is an aggregate of information from various school safety data sources, including some of those mentioned above. It is not a coordinated strategy across the federal government for collecting school safety data.

The FDS offers the federal government a unique opportunity to seize this moment in time and evaluate the school safety data that are being collected, how they are being used and by whom, and whether additional data are needed. In support of the FDS, agencies across the federal government can partner to develop a coordinated, thoughtful strategy for collecting school safety data that could resolve issues surrounding time frames, sample frames, comparability of results, and data analysis. The FDS also presents an opportunity for the federal government to create data thoughtfully, consider use by others, and plan for the future through data reuse. Finally, the FDS offers an opportunity for federal agencies to coordinate and share their data assets to advance progress on school safety, fulfill the need for broader federal information, and reduce data collection burdens.

Moving Forward

The review of these major data sets illuminates several interesting findings about the nature and extent of violent crime in schools. For example, physical bullying and threats to students have decreased over the last decades, and overall violent crime in schools has also decreased steadily, but there has been an increase in the number of multiple-victim homicides related to schools in recent years.

For educators, policymakers, and law enforcement officials to prevent these incidents in the future, we need to understand the factors that are contributing to this increase in multiple-victim homicides in schools. The school safety field would benefit from thoughtfully reconsidering data collections, guided by efforts such as the SSDB and the FDS. Specifically, the field should align the approaches taken to collect these important data with unanswered questions, while avoiding increased data collection burdens.

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For More Information

Learn about NIJ's Comprehensive School Safety Initiative at NIJ.ojp.gov, keyword: CSSI.

Read the *Indicators of School Crime and Safety* report at https://nces.ed.gov/programs/crimeindicators/.

This article discusses the following grant:

● "Understanding the Causes of School Violence Using Open Source Data," grant number 2016-CK-BX-0013

Notes

1. Lauren Musu et al., *Indicators of School Crime and Safety: 2018,* Washington, DC: U.S. Department of Education, National Center for Education Statistics and U.S. Department of Justice, Bureau of Justice Statistics, April 2019, NCES 2019-047, NCJ 252571, https://www.bjs.gov/content/pub/pdf/iscs18.pdf.

2. In this article, a violent crime is one where a victim is harmed by or threatened with physical violence.

3. Kristin Holland et al., "Characteristics of School-Associated Youth Homicides – United States, 1994-2018," *Morbidity and Mortality Weekly Report* 68 no. 3 (January 25, 2019): 53-60, doi:10.15585/mmwr.mm6803a1.

4. The School Crime Supplement to the National Crime Victimization Survey was first administered in 1989, then again in 1995, 1999, and 2001 through 2017 biennially.

5. Deborah Lessne, Christina Yanez, and Michael Sinclair, *Measuring School Climate Using the 2015 School Crime Supplement,* Technical Report, Washington, DC: U.S. Department of Education, National Center for Education Statistics, October 2018, NCES 2018-098, https://nces.ed.gov/pubs2018/2018098.pdf.

6. Musu et al., *Indicators of School Crime and Safety: 2018.*

7. Ibid.

8. Bryan Vossekuil et al., *The Final Report and Findings of the Safe School Initiative: Implications for the Prevention of School Attacks in the United States,* Washington, DC: U.S. Secret Service and U.S. Department of Education, July 2004, https://files.eric.ed.gov/fulltext/ED515942.pdf; and Randy Borum et al., "What Can Be Done About School Shootings? A Review of the Evidence," *Educational Researcher* 39 no. 1 (February 2010): 27-37, https://www.jstor.org/stable/27764551.

9. Musu et al., *Indicators of School Crime and Safety: 2018.*

10. Mary Poulin Carlton, *Summary of School Safety Statistics,* NIJ Report, Washington, DC: U.S. Department of Justice, National Institute of Justice, July 2017, NCJ 250610, https://www.ncjrs.gov/pdffiles1/nij/250610.pdf.

11. Musu et al., *Indicators of School Crime and Safety: 2018.*

12. NIJ has supported the last two data collections by providing the National Center for Education Statistics with supplemental funds through the Comprehensive School Safety Initiative. See https://nij.ojp.gov/topics/articles/ongoing-comprehensive-school-safety-initiative-research#two014.

13. All data in this paragraph are drawn from Melissa Diliberti et al., *Crime, Violence, Discipline, and Safety in U.S. Public Schools: Findings From the School Survey on Crime and Safety: 2017-18,* Washington, DC: U.S. Department of Education, National Center for Education Statistics, July 2019, NCES 2019-061, https://nces.ed.gov/pubs2019/2019061.pdf.

14. Ibid.

15. All data in this paragraph are drawn from Musu et al., *Indicators of School Crime and Safety: 2018.*

16. All data in this paragraph are drawn from Holland et al., "Characteristics of School-Associated Youth Homicides."

17. These percentages do not add to 100% because one homicide may have multiple motives.

18. Holland et al., "Characteristics of School-Associated Youth Homicides."

19. Holland et al. demonstrate that although the victimization rate of school-associated, multiple-victim homicides per 100,000 fluctuated from 1994 to 2018, the incidence rate during that period remained relatively stable.

20. These estimates do not correspond to the SAVD-SS because the time frame of the SAVD-SS is from 1994 to 2018, while the SSDB covers 1990 to 2019. Also, the SSDB includes injuries as well as deaths.

21. Office of Management and Budget, "Memorandum for the Heads of Executive Departments and Agencies: Federal Data Strategy — A Framework for Consistency," Washington, DC: Executive Office of the President, Office of Management and Budget, June 4, 2019, https://www.whitehouse.gov/wp-content/uploads/2019/06/M-19-18.pdf.

22. Ibid., 2.

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