

Introduction

The Tennessee Comptroller's Office of Research and Education Accountability (OREA) was asked to investigate the number of school shootings at elementary, middle, and high schools in Tennessee by Representative John D. Ragan.

The primary data source consulted is the *K-12 School Shooting Database*. The database was originally created in 2018 by David Riedman and Desmond O'Neill under the auspices of the Naval Postgraduate School's Center for Homeland Defense and Security.^A In response to a request from OREA, Mr. Riedman provided us with the raw data used in the database, current as of May 15, 2023. Please note that school shooting data reported for the 2022-23 school year does not include any shooting incidents that have occurred since May 15, 2023.

School shooting incidents are included in the *K-12 School Shooting Database* using the following definition: when a gun is fired or brandished on school property, or when a bullet hits school property, regardless of the number of victims, time, day, or reason.^B This definition would not include shootings at school-sponsored events that occur off school property, such as a high school sports tournament held at a university or a graduation ceremony held at a community park.^C

OREA's methodology was to filter the data for shooting incidents that occurred in Tennessee for the last 25 years, school years 1998-99 through 2022-23. A total of 63 shooting incidents were identified.^D OREA reviewed the details of the Tennessee data set and limited its analysis to 49 of the 63 incidents based on Representative Ragan's concerns about what is defined as a "school shooting."^E The 49 incidents are listed in Appendix A, and the following observations summarize key points about the 49 incidents.

Observations

1. The number of school shootings has fluctuated over the past 25 years, with the highest number (nine) reported for the 2021-22 school year.

^A The Naval Postgraduate School is a public graduate school operated by the United States Navy, located in Monterey, California. It offers master's and doctoral degrees to the U.S. Armed Forces, Department of Defense, civilians, and international partners. The Center for Homeland Defense and Security is a subsidiary of the graduate school that provides educational programs geared to the needs of agencies responsible for homeland defense and security. The original database is available at www.chds.us/ssdb/. When contract funding that supported the original database was discontinued after June 30, 2022, David Riedman began maintaining the database independently. This database can be accessed at www.k12ssdb.org.

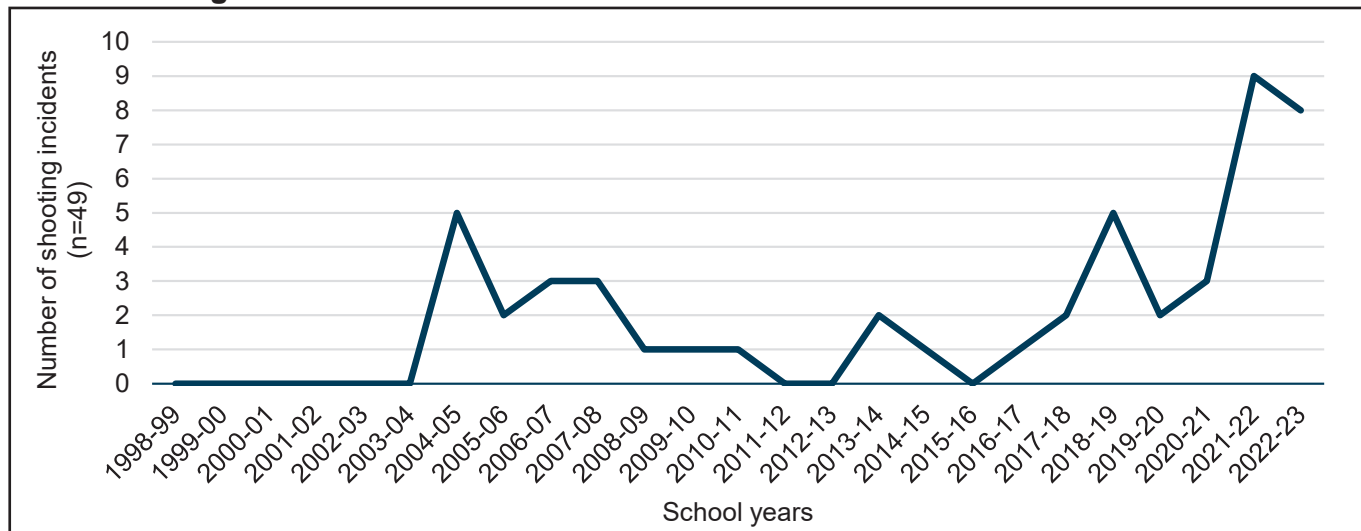
^B Incidents involving pellet guns are included in the database. Note that injuries and property damage resulted from some incidents in which they were used. The K-12 School Shooting Database, in its description of methodology, defines "brandished" as "pointed at a person with intent."

^C Although this definition would not include shootings at school-sponsored events that occur off school property, OREA found two such incidents included in the database. They are included in the 49 cases listed and in the analysis of cases.

^D A total of 79 school shooting incidents occurred in Tennessee in the 53 years documented by the full database, from September 1970 through May 15, 2023.

^E Fourteen of the 63 incidents that are not included in this analysis fell into one of the following three categories: (a) took place outside the school building when school was not in session and students were not present (e.g., an unarmed school security guard is killed when he investigated a broken-down car in the school parking lot at 10:30 at night); (b) took place outside the school building during school hours, but the incidents occurred at a school only by happenstance (e.g., a person driving a car pulls into a school parking lot at random to avoid being followed by someone else; the pursuer then shoots at the person while they are in the school parking lot); or (c) involved a school bus where neither the bus nor the driver/passengers were the targets (e.g., shots fired at another vehicle accidentally hit a school bus with at least one student on board).

Exhibit 1: Tennessee school shooting incidents have fluctuated over the past 25 years | 1998-99 through 2022-23

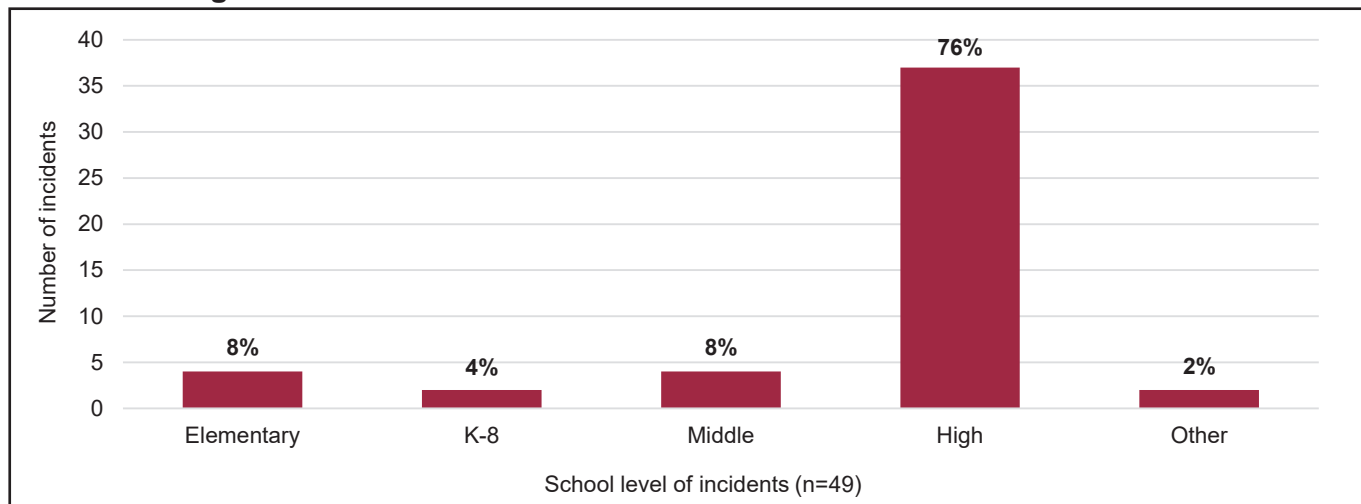


Note: Data for 2022-23 is only through May 15, 2023.

Source: *K-12 School Shooting Database*, Tennessee data, with 14 incidents removed because they took place outside the school building when school was not in session and students were not present; took place outside the school building during school hours, but the incidents occurred at a school only by happenstance; or involved a school bus where neither the bus nor the driver/passengers were the targets.

- The majority (76 percent) of school shootings in Tennessee over the last 25 years occurred at high schools. An analysis of school shootings over a 10-year period (2009-10 through 2018-19) by the U.S. Government Accountability Office (GAO) found about two-thirds of all school shootings for the nation as a whole occurred at high schools.^F

Exhibit 2: More than three-quarters of school shootings in Tennessee were at high schools | 1998-99 through 2022-23



Source: *K-12 School Shooting Database*, Tennessee data, with 14 incidents removed because they took place outside the school building when school was not in session and students were not present; took place outside the school building during school hours, but the incidents occurred at a school only by happenstance; or involved a school bus where neither the bus nor the driver/passengers were the targets.

^F The 2020 report on K-12 school shootings by the United States Government Accountability Office (GAO), *K-12 Education: Characteristics of School Shootings*, can be found here: <https://www.gao.gov/assets/gao-20-455.pdf>. Note that GAO also relied on the K-12 school shooting database compiled by the Naval Postgraduate School's Center for Homeland Defense and Security but did not omit from its analysis incidents that took place outside the school building when school was not in session and students were not present; took place outside the school building during school hours, but the incidents occurred at a school only by happenstance; or involved a school bus where neither the bus nor the driver/passengers were the targets.

3. The majority of school shooting incidents in Tennessee fell into two of the *K-12 School Shooting Database* categories of shooting situations: “escalation of dispute” or “accidental.” (See the full listing of Tennessee school shooting incidents and category definitions at Appendix A.)
 - An escalation of dispute is a physical or verbal altercation between the shooter and victim prior to the shooting or retaliation for a prior altercation or attack (e.g., during a fight between multiple students, one of the students involved pulled out a handgun and fired; following an argument earlier in the day, a student shot the other student that he/she argued with in the school parking lot).
 - An accidental shooting is one where there was no intent to fire the weapon (e.g., showing off gun and it accidentally fired; gun in backpack accidentally fired).

Exhibit 3: Two-thirds of school shootings were due to the escalation of a dispute or were accidental | 1998-99 through 2022-23

Database category	Number of shootings	Percentage of shootings
Escalation of dispute	21	43%
Accidental	11	22%
Unknown	6	12%
Drive-by	3	6%
Anger	2	4%
Hostage/standoff	2	4%
Suicide/attempted	2	4%
Illegal activity	1	2%
Indiscriminate	1	2%
Total	49	99%*

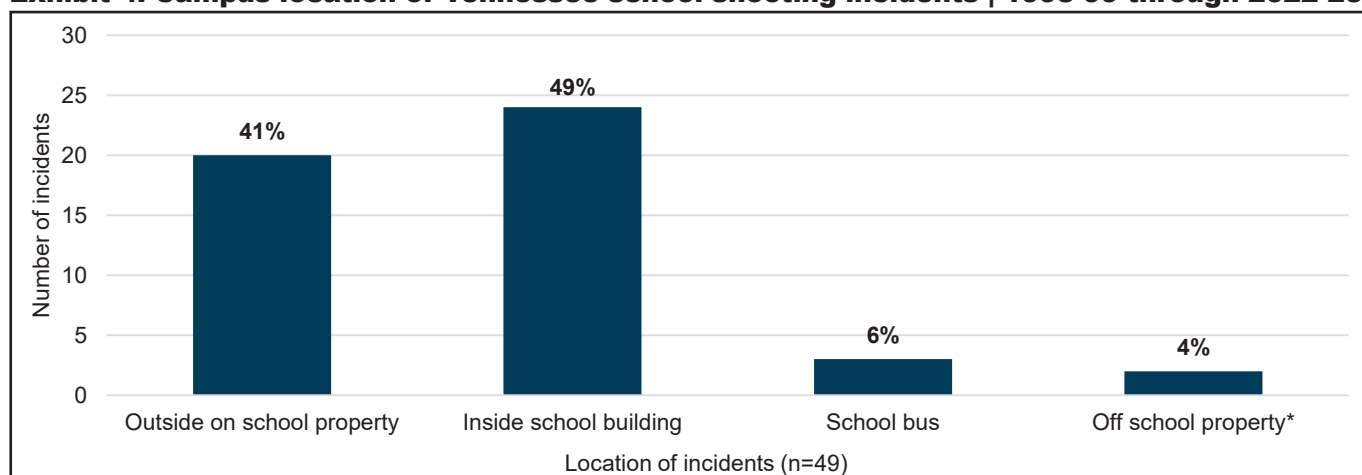
*Note: Percentages do not add to 100 percent due to rounding.

Source: *K-12 School Shooting Database*, Tennessee data, with 14 incidents removed because they took place outside the school building when school was not in session and students were not present; took place outside the school building during school hours, but the incidents occurred at a school only by happenstance; or involved a school bus where neither the bus nor the driver/passengers were the targets.

Although GAO revised the database categories somewhat, its national analysis found a similar pattern, with shootings due to a dispute or grievance being the most common shooting situation, followed by accidental shootings.

4. Three school shooting incidents met the database’s definition of “active shooter,” which is adapted from the FBI’s definition. The FBI defines an active shooter as one or more individuals actively engaged in killing or attempting to kill people in a populated area. The FBI states that this definition implies the use of a firearm and the ongoing nature of a shooting incident. The three school shooting incidents in Tennessee that met the active shooter definition fell into the following *K-12 School Shooting Database* categories: illegal activity, hostage/standoff, and indiscriminate shooting.
5. The largest share of school shootings in Tennessee over the past 25 years – 49 percent – took place inside a school building.

Exhibit 4: Campus location of Tennessee school shooting incidents | 1998-99 through 2022-23



*Note: Statistics include two incidents that took place off school property during school-sponsored events. While such incidents do not meet the database definition for school shootings, they are included in the database. These two cases are included in the 49 cases listed and in the analysis of cases.

Source: *K-12 School Shooting Database*, Tennessee data with 14 incidents removed because they took place outside the school building when school was not in session and students were not present; took place outside the school building during school hours, but the incidents occurred at a school only by happenstance; or involved a school bus where neither the bus nor the driver/passengers were the targets.

- More than half of the school shootings in Tennessee over the past 25 years occurred at urban schools (denoted as “city” schools in the national school location coding system^G). GAO’s national analysis found that less than half of school shootings (47 percent) occurred in urban schools.^H

Exhibit 5: Tennessee school shooting incidents by type of location | 1998-99 through 2022-23

Location classification	Schools with shooting incident by location type (includes private schools)	Percent of schools statewide by location type (public schools only)
City (urban)	61.2%	32.8%
Rural	18.4%	34.6%
Suburb	10.2%	15.5%
Town	10.2%	17.0%

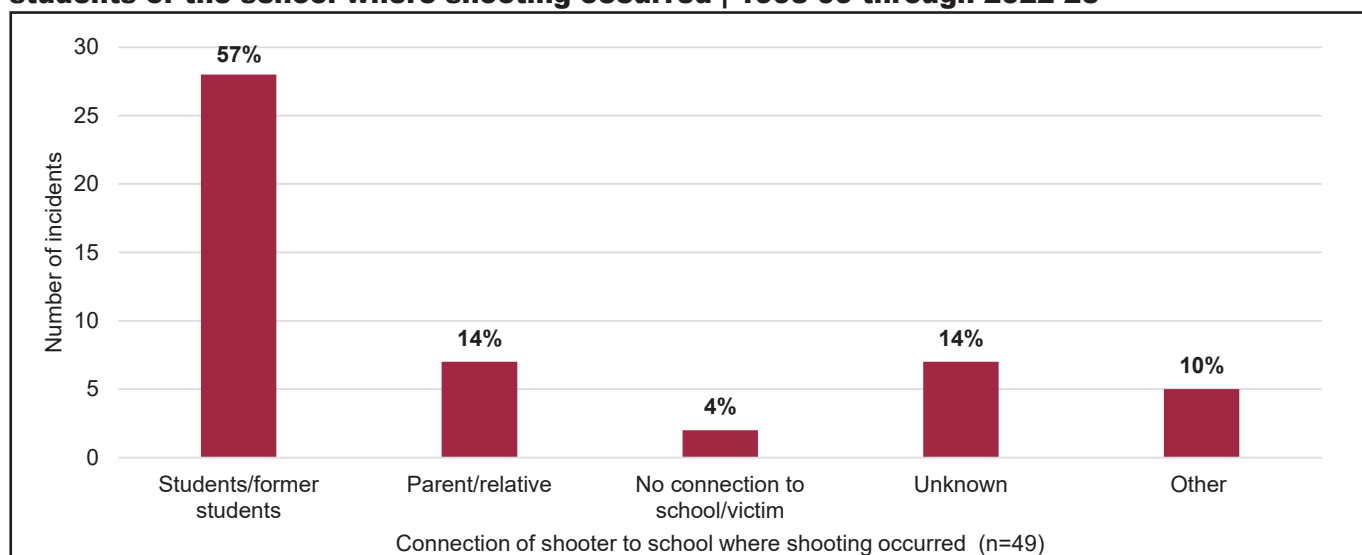
Sources: *K-12 School Shooting Database*, Tennessee data with 14 incidents removed because they took place outside the school building when school was not in session and students were not present; took place outside the school building during school hours, but the incidents occurred at a school only by happenstance; or involved a school bus where neither the bus nor the driver/passengers were the targets; National Center for Education Statistics, School Locations and Geoassignments, 2021-22 public school file.

- The majority of the shooters in Tennessee’s school shooting incidents were students or former students of the school where the shooting incident took place (57 percent). A 2020 GAO analysis of nationwide data found 49 percent of shooters were students or former students at the school where the shooting incident took place.

^G The National Center for Education Statistics worked with the United States Census Bureau to create a location classification system. Under the NCES location classification system, a city location is inside both an urban area and a principal city; a suburban location is outside a principal city but inside an urbanized area; a town location is inside an urban cluster but not an urban area; and a rural location is a census-defined rural area outside of both urban areas and urban clusters. Each of these four location types have three sub-types (not included here).

^H A total of 292 school shooting incidents were analyzed by GAO for school location factors.

Exhibit 6: More than half of Tennessee school shooters were either students or former students of the school where shooting occurred | 1998-99 through 2022-23



Source: *K-12 School Shooting Database*, Tennessee data, with 14 incidents removed because they took place outside the school building when school was not in session and students were not present; took place outside the school building during school hours, but the incidents occurred at a school only by happenstance; or involved a school bus where neither the bus nor the driver/passengers were the targets.

Other state data available on school safety

1. The Tennessee Bureau of Investigation (TBI) collects data on crimes reported at Tennessee public schools, preschool through 12th grade. Data is submitted to TBI by local police departments and sheriffs' offices on a weekly basis. TBI's most recent report, 2021 School Crime in Tennessee, is available at <https://www.tn.gov/content/dam/tn/tbi/documents/2021%20School%20Crime%20in%20TN%20Final%20SECURED.pdf>.
2. The Tennessee Department of Education (TDOE) collects data on the incidence of 10 types of serious crimes from each public school throughout the year. TDOE calculates an annual school safety index by dividing the total number of serious crimes occurring during the school year by each school's enrollment. TDOE's most recent report, Tennessee Safe Schools Report, February 2023, is available at https://www.tn.gov/content/dam/tn/education/safety/save-act/Annual_Safe_Schools_Report-Feb_2023.pdf.

Appendix A

School year	Date	School	City	Database shooting category	Meets “active shooter” definition	Victims injured	Victims killed
2004-05	8/24/2004	Hamilton High School	Memphis	Escalation of Dispute		0	0
	3/2/2005	Stewart County High School (bus)	Dover	Anger Over Grade/ Suspension/Discipline		0	1
	3/9/2005	Maplewood Comprehensive High	Nashville	Escalation of Dispute		1	0
	3/24/2005	Fairley High School	Memphis	Accidental		0	0
	3/30/2005	East High School	Memphis	Accidental		0	0
2005-06	8/25/2005	Maury Middle School	Dandridge	Accidental		1	0
	11/8/2005	Campbell County High School	Jacksboro	Illegal Activity	Yes	2	1
2006-07	9/5/2006	Kingsbury Middle School	Memphis	Escalation of Dispute		1	0
	1/24/2007	Hardin County High School	Savannah	Suicide/Attempted		0	0
	3/8/2007	East Ridge High School	Chattanooga	Suicide/Attempted		0	0
2007-08	10/24/2007	Manassas High School	Memphis	Accidental		1	0
	2/4/2008	Hamilton High School	Memphis	Escalation of Dispute		1	0
	2/11/2008	Mitchell High School	Memphis	Escalation of Dispute		1	0
2008-09	8/21/2008	Central High School	Knoxville	Escalation of Dispute		0	1
2009-10	2/10/2010	Inskip Elementary School	Knoxville	Anger Over Grade/ Suspension/Discipline		2	0
2010-11	8/30/2010	Sullivan Central High School	Blountville	Hostage/Standoff	Yes	0	1
2013-14	8/22/2013	Westside Elementary School	Memphis	Accidental		0	0
	1/9/2014	Liberty Technology Magnet High	Jackson	Escalation of Dispute		1	0
2014-15	10/21/2014	A Maceo Walker Middle School	Memphis	Accidental		1	0
2016-17	9/28/2016	Sycamore Middle School	Pleasant View	Hostage/Standoff		0	0
2017-18	2/9/2018	Peal-Cohn High School	Nashville	Escalation of Dispute*		1	0
	5/3/2018	Waynesboro Elementary School	Waynesboro	Accidental		0	0
2018-19	8/11/2018	Antioch High School	Nashville	Escalation of Dispute		1	0
	9/10/2018	Fairley High School	Memphis	Unknown		1	0
	10/5/2018	Haywood High School	Brownsville	Escalation of Dispute		2	0
	1/25/2019	Manassas High School	Memphis	Drive-by Shooting		0	0
	1/31/2019	Manassas High School	Memphis	Unknown		1	0
2019-20	8/15/2019	East Magnet High School	Nashville	Escalation of Dispute		0	0
	3/13/2020	Pine View Elementary	Rockwood	Accidental		0	0
2020-21	4/12/2021	Austin-East Magnet High School	Knoxville	Unknown		1	0
	4/13/2021	Maury County Public Schools Bus	Columbia	Escalation of Dispute		0	0
	4/27/2021	La Petite Academy	Memphis	Escalation of Dispute		0	0
2021-22	9/7/2021	La Vergne High School	La Vergne	Escalation of Dispute		0	0
	9/14/2021	La Vergne High School	La Vergne	Unknown		0	0
	9/17/2021	Austin-East High School	Knoxville	Unknown		1	0
	9/24/2021	Stewarts Creek High School	Smyrna	Escalation of Dispute		0	0
	9/30/2021	Cummings Elementary School	Memphis	Escalation of Dispute		1	0
	11/30/2021	Humboldt High School	Humboldt	Escalation of Dispute		2	1
	3/10/2022	Hamilton Middle School	Memphis	Escalation of Dispute		0	0
	3/25/2022	Brighton High School	Brighton	Drive-by Shooting		0	0
	5/18/2022	Riverdale High School	Murfreesboro	Escalation of Dispute		1	1

School year	Date	School	City	Database shooting category	Meets “active shooter” definition	Victims injured	Victims killed
2022-23	8/19/2022	West Creek High School	Clarksville	Drive-by Shooting		0	0
	10/14/2022	Riverdale High School	Murfreesboro	Escalation of Dispute		0	0
	12/5/2022	Freedom Prep High School	Memphis	Accidental		1	0
	12/10/2022	Brainerd High School	Chattanooga	Unknown		0	0
	3/23/2023	Hamilton High School	Memphis	Escalation of Dispute		0	0
	3/27/2023	Covenant School	Nashville	Indiscriminate Shooting	Yes	1	6
	4/28/2023	West High School	Knoxville	Accidental		1	0
	5/12/2023	Lenoir City High School	Lenoir City	Accidental		0	0
Total = 49 incidents						27	12

* Incident coded as “gang-related.” This is a separate classification in the database from the primary shooting category. All other Tennessee incidents were coded as not gang-related (32 incidents) or no data was available (16 incidents).

Note: Database categories with no Tennessee cases included bullying, domestic with targeted victim, intentional property damage, psychosis, murder/suicide, officer-involved shooting, racial, and self-defense.

Database shooting category	Database definition
Accidental	No intent to fire the weapon (e.g., showing off gun and it accidentally fired; gun in backpack accidentally fired).
Anger over grade/suspension/discipline	Primarily targeted teacher or school administrator due to poor grades, suspension, expulsion, or discipline. Also includes a school employee who targeted a school administrator or coworker following poor performance evaluation, suspension, or loss of employment.
Drive-by	Shots fired by a person in a vehicle at people or another vehicle on school property.
Escalation of dispute	Physical or verbal altercation between the shooter and victim prior to the shooting or retaliation for a prior altercation or attack (e.g., during a fight between multiple students, one of the students involved pulled out a handgun and fired; following an argument earlier in the day, a student shot the other student that he/she argued with in the school parking lot).
Hostage/standoff	A standoff at the school between an armed shooter and law enforcement with or without hostages taken. Hostages may have been released without injury and/or no shots were fired during the standoff.
Illegal activity	Shots were fired during a robbery, sale, or exchange of illegal drugs, trespassing, theft of property, or exchange of stolen property.
Indiscriminate	Targeting random victims with the intent to kill or injure as many as possible (e.g., fired into a crowd; shot students in the hallway and random classrooms).
Suicide/attempted	Suicide or attempted suicide by a shooter who was the only victim (not an indiscriminate shooting or revenge/bullying where shooter kills self during the shooting).
Unknown	Incidents classified as “unknown” or data was not available.
Active shooter	When the shooter killed and/or wounded victims, either targeted or random, within the school campus during a continuous episode of violence (adapted from the FBI’s definition).

Source: *K-12 School Shooting Database*, Methodology and Tennessee data, with 14 incidents removed because they took place outside the school building when school was not in session and students were not present; took place outside the school building during school hours, but the incidents occurred at a school only by happenstance; or involved a school bus where neither the bus nor the driver/passengers were the targets.

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