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RAND AMERICAN EDUCATOR PANELS

Research Report

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Teachers' Experiences with School Violence and Lockdown Drills

Findings from a 2023 American Teacher Panel Survey

Violent incidents, such as shootings, and potentially violent incidents, including threats of shootings, have become relatively common occurrences in K–12 schools across the United States. Between January 2023 and March 2024, the Gun Violence Archive (GVA), which collects information on a wide variety of firearms-related incidents across the country based on media reports, recorded more than eight shootings per month on average at K–12 schools (see Figure 1). Other databases have recorded even higher numbers of shooting incidents.[1] In addition to shootings, the GVA dataset captured news reports of an average of 68 incidents per month of confiscated guns at K–12 schools, as well as an average of eight additional incidents of gun carrying per month reported as resulting in campuswide lockdowns (GVA, undated).

A *lockdown* is a protocol commonly used by K–12 schools in response to violent incidents or threats of violence, such as shootings, in which classroom doors are locked, and students and staff go to a safe space inside their classrooms and remain quiet until an "all clear" is given. While implementation may vary by context, lockdowns generally involve locking classroom and exterior doors, turning off lights, moving out of sight of interior and exterior windows, and remaining silent (Schildkraut et al., 2023). As of the writing of this report, 96 percent of U.S. public schools have a written plan in place detailing procedures to be taken in the event of an active shooter event, which often involves lockdowns (Irwin et al., 2023). Meanwhile, 93 percent of U.S. public schools have similar plans meant to address bomb threats or incidents that could require additional or alternative steps to take during an emergency (e.g., evacuations) (Irwin et al., 2023).

KEY FINDINGS

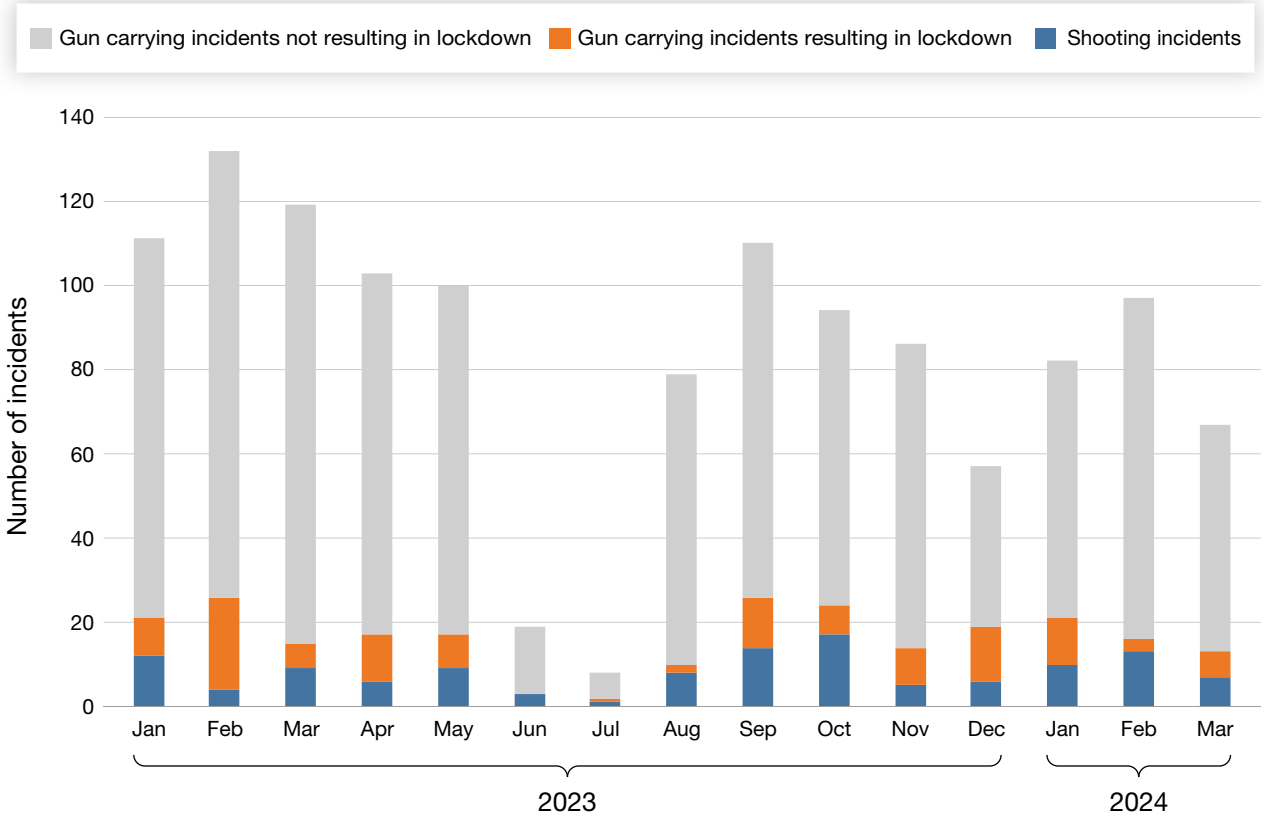
- **One in six K–12 teachers nationally works in a district that has been touched by gun violence since the 2019–2020 school year.** Roughly the same share of teachers have been affected by natural disasters in their school districts. Nevertheless, active shooters remain relatively low on teachers' lists of school safety concerns.
- Relative to the 2022–2023 school year, **teachers in 2023–2024 reported more concern about being victims of an attack at their schools and were even more concerned for their students.**
- **In the 2023–2024 school year, a greater share of female teachers than male teachers** (27 percent versus 14 percent, respectively) **reported fear of being harmed or attacked at school.** This is a change from the 2022–2023 school year, when female teachers were no more likely than male teachers to report such fears.
- According to teachers' reports, their schools are largely following key guidance around the implementation of lockdown drills to prepare for school shootings. For example, schools are avoiding the use of sensorial, realistic elements, such as sounds of real gunfire or explosions, prop or toy firearms, or fake blood. Still, **variability in the elements used and response actions involved in drills highlights the need for more standardized implementation in this area.**
- Schools do not typically announce when an active shooter drill will take place to students and parents, and **many schools are not providing supports to help students and staff manage any stress or anxiety that such drills might cause.**
- **Teachers are split on whether participation in drills makes them feel more prepared to respond to active shooter incidents:** Slightly less than half (47 percent) said that drills make them feel more prepared, and half perceived drills as having no impact on preparedness. A slight majority of teachers (54 percent) reported that drills make students feel more prepared to respond to such incidents.
- **Most teachers (69 percent) indicated that participating in active shooter drills has no impact on their perceptions of safety at school, and only one-fifth responded that drills make them feel more safe.** Their perceptions about whether drills make students feel more or less safe at school are more mixed: While slightly more than one-third of teachers reported that drills have no impact on students' perceptions of school safety, about one-fifth of teachers indicated that drills make students feel less safe at school, and another one-fifth stated that such drills have no impact on student perceptions. A sizable minority of teachers also responded not knowing how drills influenced student perceptions of feeling safe at school.

Importantly, because these datasets rely on capturing media reports of violent and potentially violent incidents, they almost certainly represent significant undercounts of true values, including of lockdowns. Survey data released shortly before the publication of this report support this hypothesis (Hurst, 2024). In October and November 2023, the Pew Research Center surveyed a nationally representative sample of teachers asking, "In the last school year (2022–2023), did your school go on lockdown because of a gun or suspicion of a gun on school property?"[2] Fifteen percent of teacher respondents said that their schools had gone on lockdown once that year, and another 8 percent said that lockdowns had happened more than once. These findings mean that about one-quarter of teachers nationally (23 percent) were in schools that experienced a lockdown at least once in the 2022–2023 school year. Looking only at teachers in high schools, the rate was even higher: 34 percent.

While converting the share of teachers who experienced a lockdown to the total number of lockdowns that occurred is not a straightforward calculation,[3] the percentages suggest that the number of lockdowns that occurred per month is more than 100 times higher than the number captured in media reports (and included in such databases as the GVA). For comparison, a 2018 *Washington Post* analysis

FIGURE 1

Incidents Involving Firearms at K–12 Schools, January 1, 2023–March 31, 2024



SOURCE: Incident samples were downloaded from GVA, undated, on April 8, 2024.

NOTE: Incident data subsets were collected for (1) all K–12 school shooting incidents, (2) all K–12 incidents of guns at school, (3) all K–12 incidents of guns at school (also tagged as "Incidents involving Lockdowns but No Violence") and (4) all "Incidents involving Lockdowns but No Violence" (also tagged as incidents at any type of school). Data subsets 3 and 4 were compared and all duplicates eliminated, and all remaining unique incidents from subset 4 were examined to eliminate incidents at institutions of higher education as were all between subsets 3 and 4 incidents in which any injury or fatality had occurred (suggesting miscoding in the database.) Data from subsets 1 and 2 were added, and all incidents from subset 2 that were already included in the cleaned combination of subsets 3 and 4 were deleted. This process resulted in datasets for all reports of shootings, all incidents of guns at school that did not cause a lockdown, and all incidents of guns at school also tagged as causing a lockdown.

estimated that more than 4 million students in U.S. schools had experienced at least one lockdown at their schools during the 2017–2018 school year. This analysis indicated that "on a typical day [that] school year, at least 16 campuses locked down," and the final tally of lockdowns exceeded 6,200—more than 250 per month that school year (Rich and Cox, 2018).

Although the resolution of a gun-related incident in a school without any shots fired is certainly a positive outcome, it is also important to recognize that protocols implemented in response to such threats—such as lockdown procedures—might have their own unintended consequences. That is, while protocols and their associated actions are intended to keep school communities safe in the event of an emergency, the actual implementation of these procedures in real-world situations can also potentially cause significant stress and trauma for students and staff alike. Furthermore, despite the fact that school shootings are shockingly prevalent and that nearly all schools have written plans to deal with such incidents, many teachers do not feel prepared for an active shooter situation. About four in ten teachers indicated in a recent national survey that their school has done only a fair or poor job of providing them with the training and resources that they need to deal with a potential active shooter (Hurst, 2024).

Abbreviations

ATP	American Teacher Panel
COVID-19	coronavirus disease 2019
FRPL	free or reduced-price lunch
GVA	Gun Violence Archive
NASP	National Association of School Psychologists
NASRO	National Association of School Resource Officers
NCES	National Center for Education Statistics

One common way that schools help their staff and students prepare for the possibility of an active shooter or other threats is by conducting practice drills. But even practice drills—which simulate lockdown situations in an attempt to increase staff and students' preparedness to respond to actual emergencies—may be troubling for school communities. Some researchers and practitioners have raised concerns that stress caused by these drills can have detrimental effects on students, teachers, and the school community more broadly. Prior research on this topic has yielded conflicting results on this point. Some research suggests there is reason for concern. For example, studies using interviews with school counselors have found that students experience significant anxiety and fear in the aftermath of drills, and some family members may experience similar reactions (Goodman-Scott and Eckhoff, 2020). Surveys of youth who have been involved in lockdown drills also reported that drills make many of them feel "scared and hopeless" (Moore-Petinak et al., 2020). In contrast, other studies have found that drills can reduce students' fear, including among youth who have been exposed to violence at school (Schildkraut and Nickerson, 2022; Schildkraut et al., 2023). Furthermore, studies have shown that lockdown drills can have measurable effects on preparedness (see, e.g., Schildkraut et al., 2023; Schildkraut and Nickerson, 2020).

The prevalence of these drills—combined with the mixed results of how these drills affect staff and students' feelings of preparedness, safety, fear, and stress—highlights the need for more research. In particular, more work is needed to understand the impact of drills on staff and students and what schools can do to better support the well-being of students and staff who are required to participate in these activities. In sum, whether drills actually make students and staff feel safer and more prepared to respond to active shooter and other emergencies at school is a critical, yet largely unanswered question.

To better understand what teachers across the United States think about school safety in general and active shooter drills in particular, we administered a survey to a randomly selected sample of 1,020 K–12 teachers. As in other recently implemented surveys administered to K–12 educators to better understand their perceptions about school safety (see, e.g., Hurst, 2024; Jackson et al., 2023), we believe that teachers are key stakeholders in school safety and security efforts because of their direct contact with students and their regular participation in safety practices, including drills.

Our main research questions for this study were as follows:

- How worried are teachers about violent incidents (especially gun violence) at their schools?
- How are schools using drills to prepare for violent incidents?
- Do teachers perceive that drills increase their and their students' sense of preparedness and safety?

Our teacher survey sought to address these research objectives by including questions (1) to gauge teachers' perceptions of school safety, their main safety concerns, their experiences with incidents of gun violence, mass shootings or other threats and natural hazard emergencies and (2) to learn about the supports and resources that their schools have made available in the aftermath of these emergencies. The survey also included a set of questions about active shooter, active assailant, or other drills designed to prepare the school community for a school shooting, starting with whether teachers had participated in such drills during the past school year (2022–2023). The survey then asked a set of follow-up questions about these drills in an attempt to understand whether these drills

made teachers feel more or less safe and prepared to respond to active assailant events and teachers' perceptions of their students' feelings about such drills. Survey questions also probed how drills were designed and implemented, as well as whether supports were available to students and staff during and following drills.[4] All survey items that we administered are shown with frequency tabulations in the appendix.

These school safety questions were administered as a module of a longer fall 2023 ATP survey. The fall 2023 ATP survey was administered between October 11, 2023, and November 7, 2023, and had a target of 1,000 complete responses. RAND researchers used probability-based sampling to invite teachers in the panel to complete the survey. In total, 1,020 K–12 public school teachers completed the survey. The survey had a 41.5 percent completion rate using the American Association for Public Opinion Research's (AAPOR's) Response Rate 6 definition (AAPOR, 2023).

RAND researchers then weighted the teacher sample to be representative of the national population of K–12 public school teachers.[5] These survey weights account for three things: (1) the individual- and school-level characteristics of each respondent, calibrated so that these characteristics closely match the characteristics of the national population of public school teachers based on the National Center for Education Statistics' (NCES's) National Teacher and Principal Survey; (2) the probability of selection into the survey sample using the full ATP sample as a frame; and (3) the probability of a teacher completing the survey.

To answer our research questions, we first investigated national patterns in teachers' responses to our survey items. Because educators' responses can vary depending on their personal experiences and school context, we also investigated various categories of teachers' survey responses. Specifically, we examined differences by teacher-level characteristic (e.g., gender, race/ethnicity) and by school-level characteristic (e.g., school locale, poverty level, student racial and ethnic composition). Unless otherwise noted, we call out in the text only subgroup differences that are statistically significant at the $p < 0.05$ level.

How Worried Are Teachers About Violent Incidents at Their Schools?

Schools across the country deal with shootings (and other types of violent incidents) on a far too regular basis. School shootings have increased substantially in recent years, and more children are dying from gun violence than from any other cause (Matthews, 2024; Choi, 2023). In this section, we investigate how many teachers work in schools that have been touched by gun violence and how worried they are about the potential for gun violence, as well as other lesser types of violence at their schools.

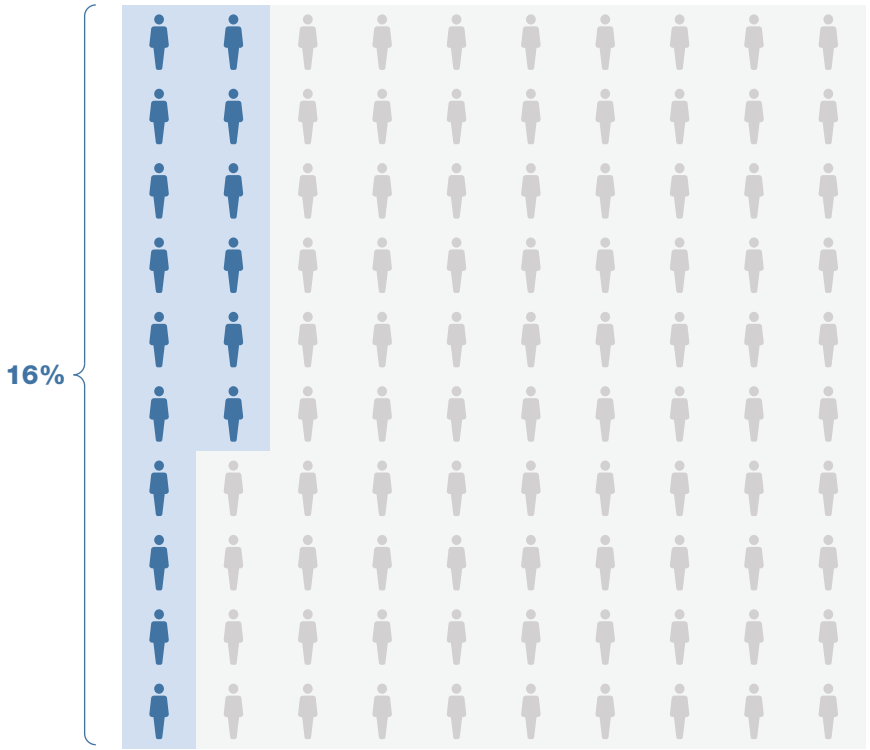
Roughly One in Six Teachers Work in a District That Has Been Touched by Gun Violence in the Last Five School Years

As shown in Figure 2, 16 percent of teachers nationally (or about one in six) teach in a school district that had been touched by gun violence at some point in the last five school years (i.e., since the 2019–2020 school year).[6] According to teachers' reports, the vast majority of these incidents fell short of the threshold to be categorized as a mass shooting.[7] One percent of teachers represented in our national survey indicated their district experienced a mass shooting within the last five school years. These percentages suggest there were perhaps more shooting incidents at schools than are reported in media sources, as was the case for the rate of lockdowns implemented in K–12 schools across the country.

School shootings have increased substantially in recent years, and more children are dying from gun violence than from any other cause.

FIGURE 2

Percentage of Teachers Who Teach in a District That Has Experienced Gun Violence Since the 2019–2020 School Year



NOTE: This figure depicts response data from the following survey question: "At any point over the last five school years, including this school year (i.e., since 2019–2020), has your school or another school in your district experienced any of the following incidents?" (n = 1,004). Respondents were presented with a list of incidents and asked to select all that apply. This figure includes responses that indicated teachers' districts had experienced "a mass school shooting (where 4 or more individuals were killed or injured)" and/or "a gun violence incident that is not a mass shooting."

To contextualize the prevalence of gun violence, we also asked teachers whether their districts had experienced other types of threats and hazards in the last five school years. In fall 2023, 44 percent of teachers responded that their districts had experienced a bomb threat or other threat of violence during this period, and 37 percent of teachers said that their districts had experienced a student or staff suicide. Furthermore, 18 percent of teachers reported that their districts had experienced an extreme weather or natural disaster emergency (e.g., a hurricane, tornado, wildfire, flood, or earthquake) that closed school for at least five consecutive days. Assuming that many of the threats received by schools included threats of gun violence specifically, and in light of statistics showing that firearms are the most lethal form of suicide (Kaczkowski, 2023), these data suggest that schools across the country are experiencing various forms of gun violence and threats of such violence nearly as frequently as they are facing natural disaster emergencies.

Although gun violence remains a relatively infrequent incident across all school types, teachers in some school types represented in our survey were more likely to report experiencing this particular form of violence. Specifically, teachers working in urban schools, suburban schools, large schools (i.e., those having 450 or more students), and in schools serving mostly students of color (i.e., 50 percent or more of students do not identify exclusively as White) were more likely than their peers in rural schools, small schools, and schools serving mostly White students (i.e., 50 percent or more of students identify

exclusively as White) to indicate that their district had experienced gun violence in the last five years.

Teachers in large schools and secondary (middle and high) schools were also more likely to report that their districts had experienced incidents of bomb threats or other threats of violence in the last five years. Teachers in large schools and high schools were also more likely to report that their districts had a history of student or staff suicides. According to teacher responses, these incidents were also more common in low-poverty schools (i.e., those in which less than 50 percent of students qualify for a free or reduced-price lunch [FRPL]) and suburban schools. In summary—and perhaps unsurprisingly—a history of violent incidents and threats of violent incidents were more common in certain school types than in others. In contrast, we generally did not observe significant differences by school type in the percentage of teachers indicating that their districts had a history of extreme weather events.

These data generally comport with an analysis conducted by the U.S. Government Accountability Office examining school shootings between the 2009–2010 and 2018–2019 school years, which found that more school shootings occurred in schools located in urban areas, schools serving a majority of students of color, and schools serving a majority of low-income students (U.S. Government Accountability Office, 2020). Federal data also show that violent incidents beyond school shootings tend to be concentrated in these same types of schools (Burr, Kemp, and Wang, 2024).

Active Shooter Incidents Remain Comparatively Low on Teachers' Lists of School Safety Concerns

Data from another nationally representative survey of teachers (also administered via the ATP) conducted around the same time as ours found that 59 percent of teachers nationally are at least somewhat worried about the possibility of a shooting at their school (Hurst, 2024). This includes 11 percent of teachers who are very worried and 7 percent of teachers who are extremely worried (Hurst, 2024). We also found that a small percentage of teachers placed school shootings at the top of their lists of school safety concerns in the 2023–2024 school year. In our survey, 6 percent of teachers identified an active shooter incident as the largest safety concern at their schools—a percentage roughly on par with the survey data in Hurst (2024) on teachers who were extremely worried about the risk of school shootings. Notably, after controlling for teacher and school demographics, as well as school district history of violent incidents, teachers in districts that had experienced gun violence in the last five years were no more likely than their counterparts to select an active shooter as their top school safety concern.[8]

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In our survey, we collected data on other high-priority safety concerns for teachers: Nearly half of teachers (46 percent) identified bullying and cyberbullying as the largest safety concern at their schools. Meanwhile, 13 percent of teachers selected student fights as their largest safety concern, 11 percent selected drugs, and 9 percent selected violence against teachers and other school staff members. Fewer than 10 percent of teachers identified such problems as other crimes (e.g., theft, vandalism), acts or ideations of self-harm, weapons, and sexual harassment as their top concerns.

Notably, teachers' relative rankings of school safety priorities were virtually unchanged from when

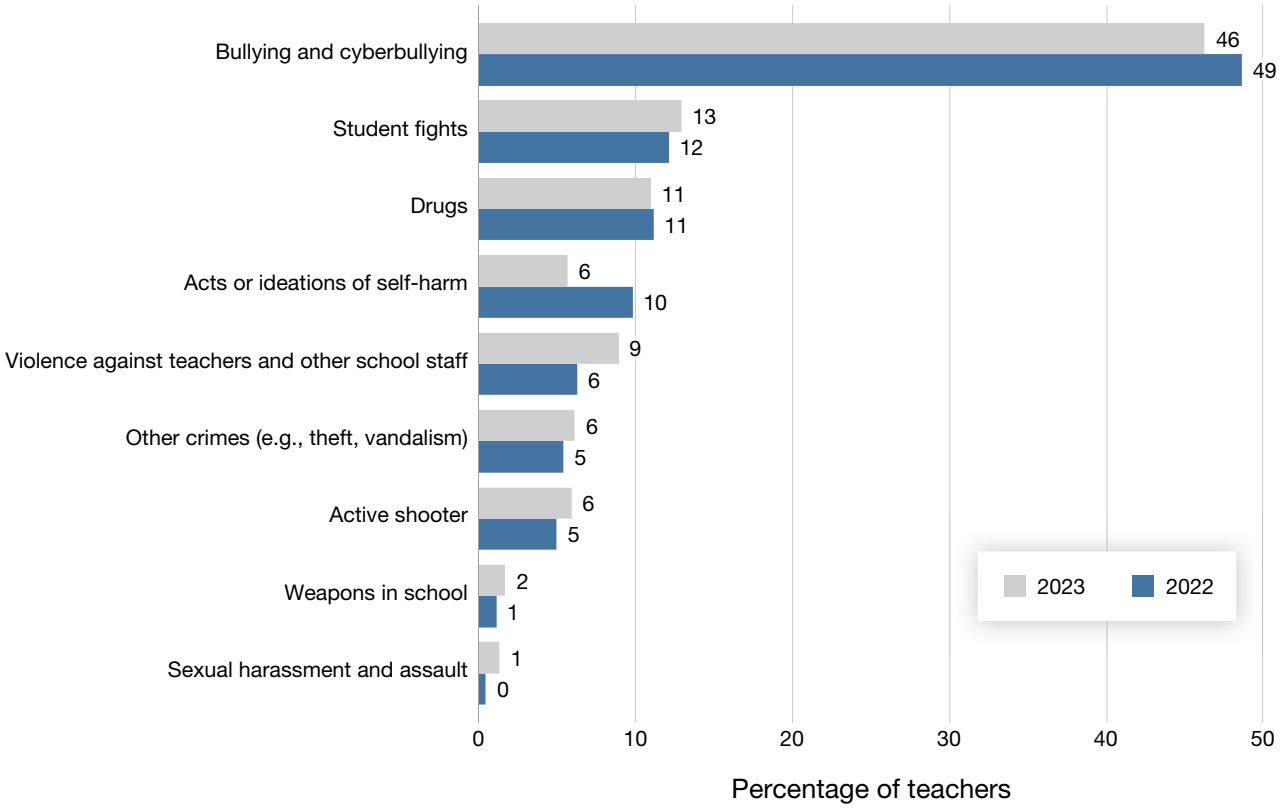
we asked this same question in surveys fielded to teachers during the 2022–2023 school year: In fall 2022, 5 percent of teachers identified the possibility of an active shooter as the largest safety concern at their schools (Jackson et al., 2023). Like in fall 2022, we observed differences in teachers' perceptions of safety concerns in fall 2023 based on their school grade level (see Figure 3). For example, teachers in elementary and middle schools were especially concerned about bullying and cyberbullying, while high school teachers were more concerned about drugs. Active shooters rated low on teachers' lists of top safety concerns regardless of school grade level. That said, elementary teachers were slightly more likely than their counterparts in middle and high schools to identify active shooters as their top safety concern: 8 percent of elementary teachers selected active shooters as their top safety concern, compared with 3 percent of middle school teachers and 4 percent of high school teachers.

Teachers Fear That They or Their Students Will Be Attacked or Harmed at School Increased over the Last School Year

Although teachers' levels of concern about active shooter attacks remain low relative to other school safety concerns and unchanged since the 2022–2023 school year, their fear that they or their students will be attacked or harmed at school increased substantially. As shown in Figure 4, the percentage of teachers who reported fearing that their students will be the victims of attack or harm at school increased from 34 percent in fall 2022 to 47 percent in fall 2023, a 13-percentage point increase. Similarly, the

FIGURE 3

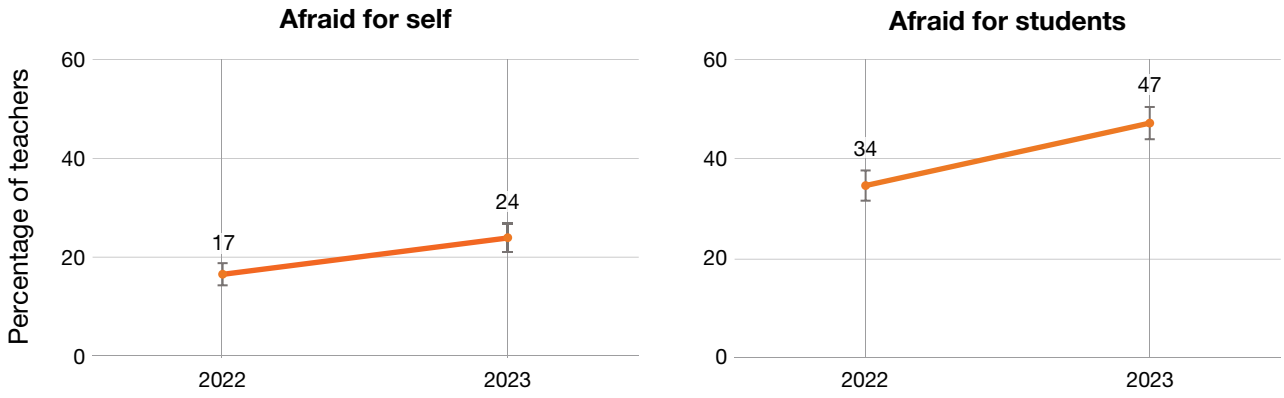
Percentage of Teachers Who Indicated That Various School Safety Topics Pose the Largest Safety Concerns at Their Schools, Fall 2022 Versus Fall 2023



NOTE: This figure depicts response data from the following survey question: "Which of the following do you think currently poses the largest safety concern at your school?" (n = 1,006 in fall 2023; n = 973 in fall 2022).

FIGURE 4

Percentage of Teachers Who Reported Being Afraid That They or Their Students Will Be Victims of Attack or Harm at School



NOTE: This figure depicts response data from the following survey questions: "Are you afraid that students at your school will be the victims of attack or harm?" and "Are you afraid of being the victim of attack or harm at your school?" (n = 1,005). Black bars represent 95-percent confidence intervals around each estimate.

percentage of teachers who were afraid that they would be the victims of attack or harm increased from 17 percent in fall 2022 to 24 percent in fall 2023, a 7-percentage point increase. In both fall 2022 and 2023, teachers reported greater concern over their students' safety than their own.

We caution readers that teachers might have been thinking of other forms of school violence—such as verbal abuse, physical attacks, and fights—instead of or in addition to gun violence when they responded to the questions shown in Figure 4. Nevertheless, the increase that we observed between fall 2022 and fall 2023 in teachers' concerns about school safety generally comports with findings from other recent studies. For example, teacher surveys conducted by *Education Week* in 2022 and again in 2023 found that about four in ten teachers feel less safe at school than they did before the coronavirus disease 2019 (COVID-19) pandemic (Gewertz, 2022; Peetz, 2023). Other nationally representative surveys conducted by our RAND colleagues in 2021–2022 and 2022–2023 found a slight uptick in the share of teachers who are concerned for their own physical safety at school, although the wording of this survey item differed slightly across survey administrations (Doan et al., 2022; Doan, Steiner, and Woo, 2023). In 2023, about half of teachers indicated that an active shooter was in their top three reasons for being afraid of their physical safety at school, including 29 percent of teachers who ranked active shooter as their top reason (Doan, Steiner, and Woo, 2023).

In sum, recent teacher surveys consistently suggest that teachers' concerns about school safety is growing and that fear about the possibility of an active shooter might be one reason why. The extent to which teachers' changing perceptions about their (and their students') safety at school aligns with trends in actual school violence; however, whether schools are becoming less safe is more of an open question (see sidebar on the next page).

For the most part, teachers' fear that they might be attacked or harmed at school did not vary by teacher- or school-level characteristics. There was one exception, however: In fall 2023, a greater share of female than of male teachers reported fear of being harmed or attacked at school (27 percent versus 14 percent, respectively). In fall 2022, female teachers were no more likely than their male counterparts to report fear of being attacked or harmed at school. This difference suggests that the national increase we observed in teachers' fear of harm at school between 2022 and 2023 was driven by an increased fear among female teachers (who comprise about three-quarters of the K–12 teacher workforce) (NCES, 2020–2021).

Are Schools Actually Becoming Less Safe?

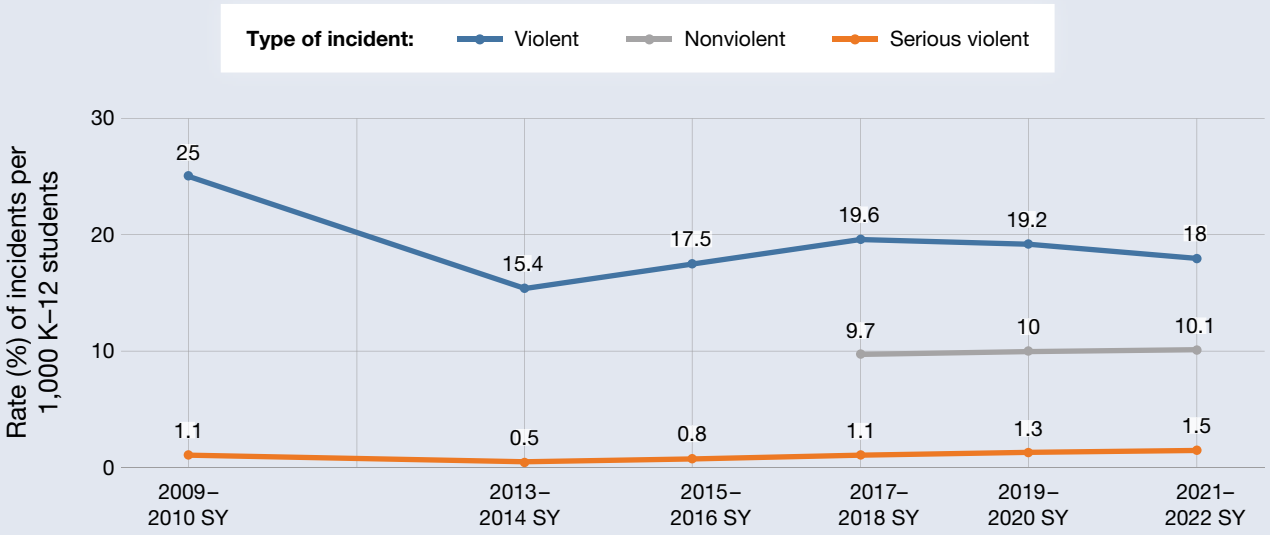
The increase that we (and others) have observed in teachers' fear of being harmed or attacked at school suggests that teachers perceive schools as becoming "less safe" or are experiencing heightened levels of violence. However, prior work has shown that individuals' perceptions of crime trends—both in and outside schools—are frequently incongruent with actual trend data (Astor, 2023; Frederique, 2020; Gramlich, 2016). Is there evidence to suggest that schools are actually becoming less safe? That is, do teachers' perceptions align with data on actual school violence?

This question is difficult to answer definitively for several reasons. National data on school violence are not collected annually, and the most recent data (which are from the 2021–2022 school year) lag several school years behind. Teacher surveys—which have been administered more recently—capture only teachers' perceptions of school violence trends. Schools also experience many types of incidents, ranging from such lower-level offenses as student verbal abuse of teachers up to extremely violent incidents, such as school shootings. Some of these incidents might be becoming more prevalent, while others might be remaining at the same level or even decreasing over time. Furthermore, incidents of school violence—though they can be extreme—are still relatively rare, meaning that trends can be easily swayed by the addition or removal of a few incidents in a single school year.

With these caveats in mind, the evidence on whether schools are becoming less safe in recent years is mixed. On the one hand, databases documenting trends in school shootings confirm that the frequency of these types of incidents has increased over the last few years; in fact, 2023 was a record high year for school shootings (GVA, undated; NCES, 2023a; Violence Prevention Project, undated; Cox et al., undated). Similarly, federal data show that the rate of serious violent incidents (which are a subset of all violent incidents) in schools has continued to increase (see Figure S.1). On the other hand, the rate of violent incidents per 1,000 students in K–12 schools declined slightly from a recent peak in the 2017–2018 school year, while the rate of nonviolent incidents in the 2021–2022 school year remained unchanged from the previous school year.

FIGURE S.1

Rate of Violent and Serious Violent Incidents per 1,000 Students in K–12 Schools over Time



SOURCE: Authors' analysis of data from Neiman, 2011 (2009–2010 SY); NCES, 2015 (2013–2014 SY); Diliberti et al., 2017 (2015–2016 SY); Diliberti et al., 2019 (2017–18 SY); Wang, Kemp, and Burr, 2022 (2019–2020 SY); Burr, Kemp, and Wang, 2024 (2021–2022 SY).

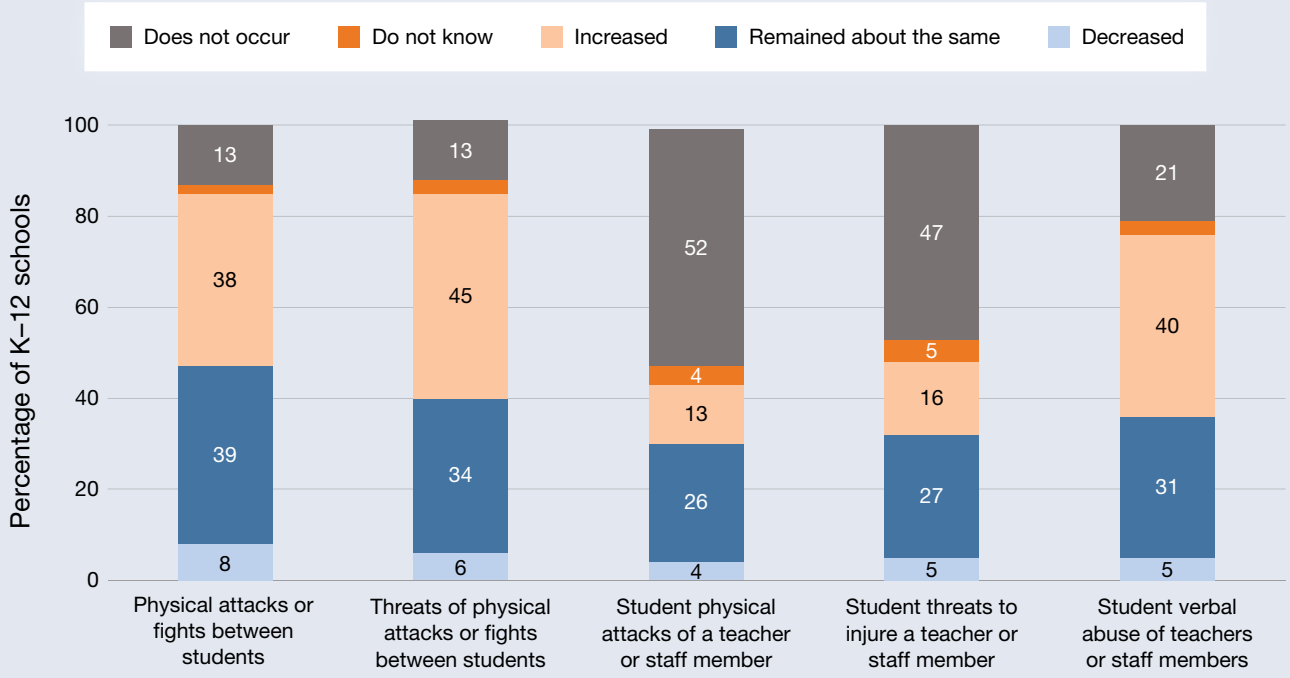
NOTE: *Violent* incidents include serious violent incidents as well as physical attack or fight without a weapon and threat of physical attack without a weapon. *Serious violent* incidents include rape or attempted rape, sexual assault other than rape (including threatened rape), physical attack or fight with a weapon, threat of physical attack with a weapon, and robbery (taking things by force) with or without a weapon. Before the 2015–2016 school year, the survey used the term *sexual battery* before changing it to *sexual assault*. *Nonviolent* incidents include theft or larceny; possession of a firearm or explosive device; possession of a knife or sharp object; distribution, possession, or use of illegal drugs or alcohol; vandalism; and inappropriate distribution, possession, or use of prescription drugs. SY = school year.

Furthermore, data from a nationally representative survey of K–12 schools conducted in May 2022 suggest that student behaviors at school have changed since before the COVID-19 pandemic, presumably in part because of students' stunted social and emotional development after several years of disruptions to schooling (Institute of Education Sciences, undated). At that time, 45 percent of K–12 schools said that threats of physical attacks or fights between students had increased above prepandemic levels (see Figure S.2). Although a smaller share of schools reported a rise in student threats of attack against school staff, 40 percent of K–12 schools said that verbal abuse of teachers had increased.

Taken together, these data suggest that schools' climate—if not their actual level of violence—may be changing in ways that matter for teachers' perceptions of safety. And even if teachers' feelings of safety do not exactly track with actual crime trends, teachers' perceptions are likely still important for their well-being and willingness to remain in the profession. In 2023, teachers ranked managing student behavior as their top source of stress—more than other widespread issues currently dominating public education (e.g., students' learning recovery, the intrusion of political issues into schooling) and teachers' work conditions (e.g., low salary, working hours) (Doan et al., 2023). And although it is not the main reason they consider leaving the profession, 13 percent of teachers did say that physical safety is one reason they consider leaving (Doan et al., 2023).

FIGURE S.2

Percentage of K–12 Schools That Indicated the Prevalence of Various Behavioral Incidents Relative to Prepandemic Levels (as of May 2022)



SOURCE: Authors' analysis of May 2022 School Pulse Panel data (Institute of Education Sciences, undated).

NOTE: This figure depicts response data from the following survey question administered to a nationally representative sample of K–12 schools in May 2022: "Compared to a typical school year before the start of the COVID-19 pandemic, have any of the following student behaviors changed at your school during the 2021–22 school year."

In contrast, teachers' fear for their students was significantly related to school context. In both fall 2022 and fall 2023, teachers in high-poverty schools, secondary schools, and urban schools were more likely than their counterparts in low-poverty schools, elementary schools, and rural schools to report fear that their students might be harmed. Teachers' perceptions generally comport with prior work showing that school violence tends to be concentrated in larger schools, secondary schools, urban schools, and schools serving a majority of low-income students (e.g., Burr, Kemp, and Wang, 2024).

Teachers in Districts That Have Experienced Recent Gun Violence Are More Afraid That They or Their Students Will Be Harmed at School

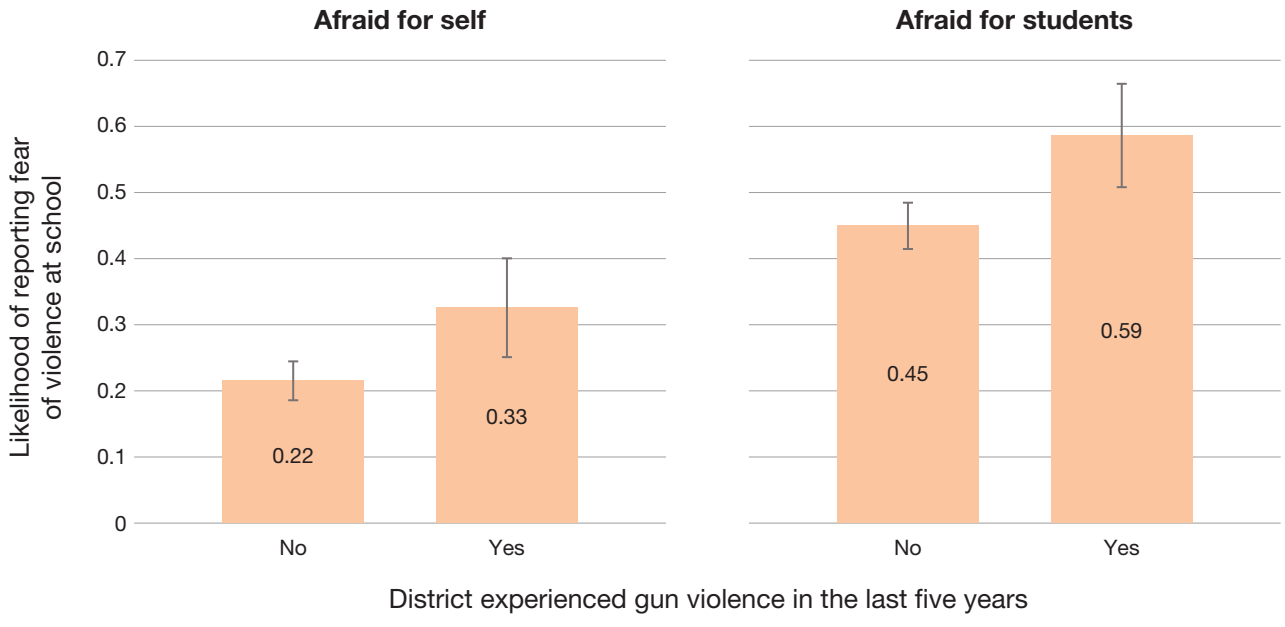
Unsurprisingly, those teachers who taught in districts that had experienced gun violence in the last five years were more likely than their peers in districts that had not experienced such violence to report being afraid that they or their students would be victims of attack or harm at school. For example, as shown in Figure 5, teachers in districts previously struck by gun violence were more likely than their counterparts in districts that had not been stuck by gun violence in the last five years to report being afraid that their students would be victims of attack or harm at school (0.59 versus 0.45, respectively).

How Are Schools Using Drills to Prepare for Violent Incidents?

As of November 2022, according to a federal survey of school principals, almost all K–12 public schools (96 percent) had a written plan describing procedures to be performed in the event of an active shooter (Institute of Education Sciences, undated). Large majorities of schools had plans for other types of

FIGURE 5

Likelihood of Teachers Reporting Fear That They or Their Students Might Be Victims of Attack or Harm at School



NOTE: This figure depicts response data from the following survey questions: "Are you afraid that students at your school will be the victims of attack or harm?" "Are you afraid of being the victim of attack or harm at your school?" and "At any point over the last five school years, including this school year (i.e., since 2019–2020), has your school or another school in your district experienced any of the following incidents?" (n = 952). The figure shows margins from a logistic regression model predicting teachers' likelihood of indicating that they or their students could be victims of attack or harm as a function of whether the teachers' district had experienced gun violence in the last five years. This is a dummy variable that equals 1 if the teacher indicated that their district had experienced "a mass school shooting (where 4 or more individuals were killed or injured)" and/or "a gun violence incident that is not a mass shooting." Controls include teacher-level demographics (sex, race/ethnicity, years of experience), school demographics (grade level, size, poverty level, student racial and ethnic composition, locale), and history of incidents (bomb threats, extreme weather or natural disaster that caused an emergency school closure, a student or staff suicide) in the last five years as self-reported by the respondent. Black bars represent 95-percent confidence intervals around each estimate.

threat and natural hazard emergencies, such as natural disasters (94 percent), bomb threats (90 percent), and suicide threats or incidents (91 percent), among others (Institute of Education Sciences, undated). Most schools also reported drilling students on emergency procedures to be used in response to these or similar incidents. The same survey indicated that 96 percent of schools drilled (or had plans to drill) students on evacuation procedures during the 2022–2023 school year, 95 percent drilled students on lockdown procedures, and 93 percent drilled students on evacuation procedures (Institute of Education Sciences, undated). Schools typically drilled students on these procedures two to five times per school year (Institute of Education Sciences, undated).

In our survey, we asked our national sample of teachers whether they took part in active shooter, active assailant, or other drills at their schools that their districts had designed to prepare for school shootings in the last school year. Echoing results from the federal principal survey fielded by the Institute of Education Sciences, the vast majority of our surveyed teachers (90 percent) took part in active shooter drills during the 2022–2023 school year. Roughly one-quarter of these teachers (28 percent) took part in one drill, while 62 percent took part in more than one drill during the 2022–2023 school year.

Despite the near universal adoption of such practices, there is little empirical research around the implementation of drills at K–12 schools (Cornell, Mayer, and Sulkowski, 2021). Furthermore, few studies center on school staff perceptions of school safety drills, even though they are integral to drill implementation (Eckhoff and Goodman-Scott, 2023).

To fill this gap, we asked those teachers who said that they had participated in at least one drill during the 2022–2023 school year how these drills were implemented in their schools. In the next section, we use teachers' responses to these survey items to build a profile of what active shooter drills look like in practice across the nation. We restricted our sample to the 90 percent of surveyed teachers (n = 897 teachers) who participated in at least one drill during the 2022–2023 school year. We first build a profile of what these drills looked like, then discuss what preparation and discussions occur, if any, before the drills occur. We conclude by investigating what schools typically do after these drills to support students.

Instructions to Students About What to Do During School Safety Drills Differs Somewhat by Grade Level

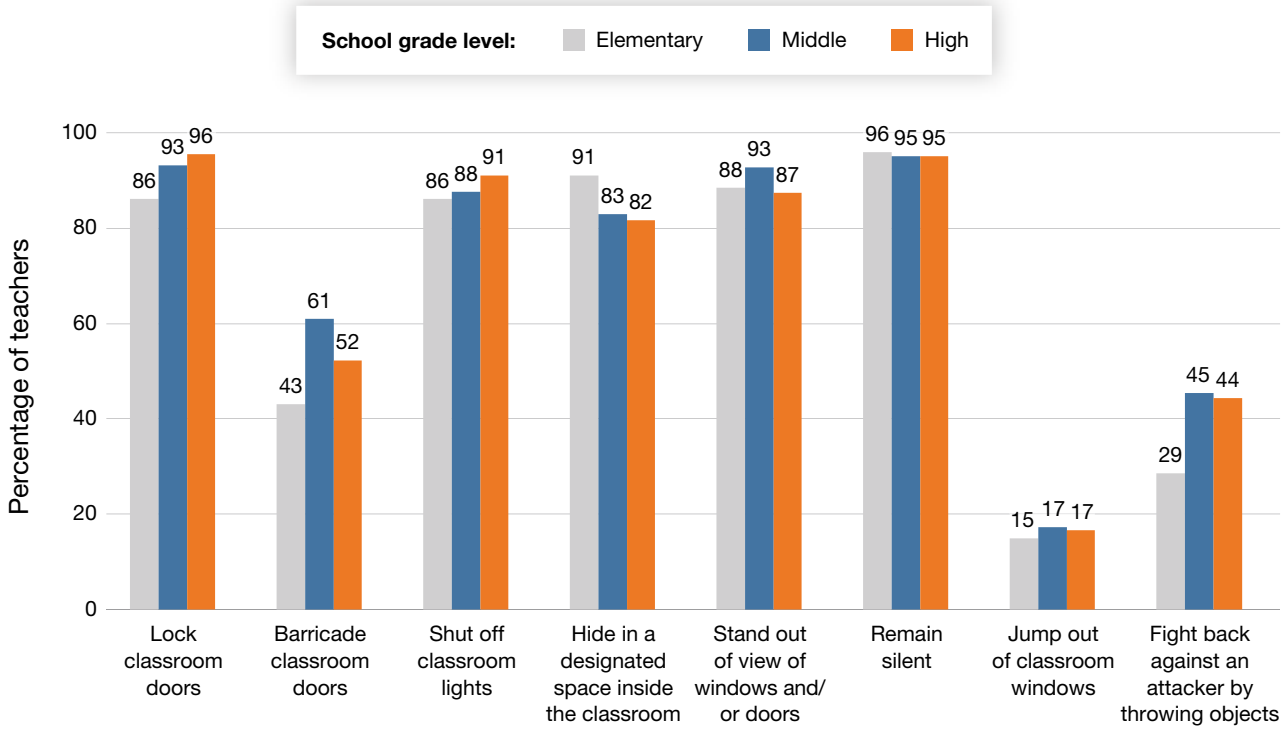
We asked teachers what actions students at their schools are instructed to take during drills designed to prepare them for school shootings. Most teachers said that their students are instructed to remain silent (96 percent), lock classroom doors (91 percent), stay out of view of windows and/or doors (89 percent), shut off classroom lights (88 percent), and hide in a designated space inside the classroom (86 percent). Meanwhile, only half of teachers said that their students are instructed to barricade classroom doors (49 percent), and even fewer said that their students are instructed to fight back against an attacker (37 percent) or jump out of classroom windows (16 percent). Six percent of teachers indicated that their schools provide "other" instructions. In these open-ended other responses, teachers most commonly mentioned that students are instructed to flee, run, or evacuate the building if safe to do so.

Importantly, however, we observed some differences in teachers' responses by grade level. As shown in Figure 6, elementary teachers were *more likely* than their secondary (middle and high school) counterparts to say that students are instructed to hide in designated spaces within the classroom. In contrast, elementary teachers were *less likely* than

The vast majority of our surveyed teachers (90 percent) took part in active shooter drills during the 2022–2023 school year.

FIGURE 6

Percentage of Teachers Who Indicated That Students at Their Schools Are Instructed to Take Various Actions During Drills to Prepare Them for School Shootings



NOTE: This figure depicts response data from the following survey questions: "What actions are students at your school instructed to take during drills to prepare them for school shootings?" (n = 896). Respondents were instructed to select all that apply. This figure includes responses only from those teachers who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). An asterisk (*) indicates that the percentage of secondary (middle or high school) teachers who indicated that students were instructed to take that action is statistically significantly different from the percentage of elementary teachers who responded similarly.

their secondary counterparts to say that their students are instructed to lock and barricade classroom doors. Elementary teachers were also less likely to say that their students are instructed to fight back against an attacker by throwing objects. A variety of factors could explain these differences by school grade level, including school layouts and different assumptions about the practicality or appropriateness of various responses to incidents at various ages.

There is some evidence to suggest that these school grade level differences in schools' instructions about what to do during drills are intentional. Although half of teachers did not know whether the drills in which they participated were designed to meet the needs of various student populations, among the half that did, accommodating students of different age groups was the most common way that schools designed drills to meet student needs. Forty percent of teachers indicated that the drills in which they participated were designed to address the needs of students in different age groups. In contrast, 26 percent of teachers said that drills were designed to meet the needs of students with physical disabilities, 23 percent responded similarly about students with developmental disabilities, and 16 percent did so in regard to students with emotional challenges. Notably, only 12 percent of teachers said that their drills were designed to address the needs of students with prior traumatic experiences.

Drills Rarely Include Realistic Sensory Elements, Though Many Have Police Participation

According to teacher reports, police participation in school safety drills is relatively common. Slightly

under half of teachers (44 percent) told us that their drills include police officers or other uniformed security personnel inside the school. However, teachers told us that their schools' active shooter drills rarely include sensory or other elements intended to mimic an actual violent incident. Only 6 percent of teachers said that their drills included sounds of real gunfire, 5 percent said that drills included the police or security officers firing blanks inside the school, 4 percent said that drills included prop or toy firearms, 1 percent said that drills included the sound of explosions, and 1 percent said that drills included fake blood. Most teachers (55 percent) said that their schools' drills had no realistic elements (including police). These patterns suggest that most schools are implementing drills according to guidelines issued by NASP and NASRO. These groups recommend "avoiding highly sensorial drills that involve simulation activities to mimic a real experience as they can be traumatizing" (NASP, Safe and Sound Schools, and NASRO, 2021). Notably, teachers who serve in districts that have a history of gun violence were no more likely than their counterparts in districts without a history of gun violence to indicate using realistic elements in their drills, after controlling for school demographics.

We had hypothesized that secondary teachers might be more likely to report having drills that include realistic elements than elementary teachers, thinking that secondary schools might be more likely than elementary schools to consider drills with realistic elements as age appropriate. In fact, we found that fewer elementary teachers than middle school teachers reported having drills that included a police presence (39 percent versus 51 percent, respectively). We suspect that this difference is driven primarily by the fact that middle and high schools are far more likely than elementary schools to have a dedicated police presence (see, e.g., Jackson et al., 2023). Otherwise, we did not observe significant differences in the presence of realistic elements included in drills by school grade level.

Instead, we observed the starkest differences around drill elements by school locale. Teachers in rural schools were more likely than their urban and suburban counterparts to say that their schools used realistic elements in drills. Fifty-seven percent of teachers in rural schools said that their drills included at least one realistic element, compared with 46 percent of teachers in suburban schools and 32 percent of teachers in urban schools. For example, 54 percent of rural teachers said that their drills included police, compared with only 45 percent of suburban teachers and 31 percent of urban teachers. Similarly, 9 percent of rural teachers said that their drills included the sounds of real gunfire, compared with only 5 percent of suburban schools and 4 percent of urban schools. Teachers in rural schools were also more likely than teachers in suburban schools to indicate that they integrated security personnel firing blanks and prop or toy firearms into their drills. These same patterns were present among schools serving mostly White students versus schools serving mostly students of color.

Because active shooter drills can be stressful and fear-inducing for students, we also asked teachers whether their schools have adult drill monitors who are trained to remove students or others exhibiting signs of trauma. Few teachers (only 16 percent) indicated that their schools have adults monitoring students for signs of trauma in real time. Although drills might be traumatic for students even if they do not include realistic elements, we hypothesized that schools that use such realistic elements as police officers and the sound of gunfire in their drills might be more likely to have adults monitoring students for signs of trauma, because drills with more realistic elements might be *especially* troubling for students. However, we did not find this to be the case. After controlling for school demographics, we found that teachers in schools where drills integrate realistic elements were no more likely than their counterparts in schools conducting drills without realistic elements to report having adults monitoring students for signs of trauma in real time.

Teachers Typically Know When Active Shooter Drills Are Going to Happen, but Students (and Parents) Typically Do Not

NASP, Safe and Sound Schools, and NASRO guidelines (2021, p. 6) recommend that armed assailant drills should never be unannounced; all partici-

pants should "know ahead of time that the drill will take place and what to expect, including what announcement will be made or what bell will sound to start the drill." This guidance also recommends notifying student caregivers in advance of a lockdown drill. Parents should always provide consent for their children to participate in drills, and such parental permission can take many forms, ranging from default consent up to passive consent to active consent. Although NASP and NASRO support parents' rights to opt out their children from such drills, they recommend that drills always be replaced with alternate preparation activities (e.g., tabletop activities) (NASP, Safe and Sound Schools, and NASRO, 2021).

Our survey data suggest that many schools conduct drills that do not align with this recommendation. The vast majority of teachers (86 percent) said that they are provided advanced notice about drills designed to prepare them for school shootings. In contrast, according to teacher reports, it is much less common for students and parents to receive advanced notice about these drills. Only 37 percent of teachers said that their schools give students advanced notice about active shooter drills. However, half of teachers (48 percent) said that their schools support students through classroom- or other discussion-based exercises prior to planned drills. We did not ask teachers what these discussions entail or how they are conducted.

Meanwhile, 28 percent of teachers said that their schools give parents advanced notice about these drills (30 percent of teachers were not sure whether their schools did so). In the minority of cases in which parents were notified in advance, teachers overwhelmingly said that parents received just a notification—not a request for permission for their children to participate. In fact, only 1 percent of teachers said that their schools require parents to be notified—and to actively provide consent—in advance of active shooter drills.

Most teachers (58 percent) said that all students at their schools must participate in drills to prepare them for school shootings, although a considerable minority (32 percent) were not sure whether all students were required to participate. The sizable number of teachers—especially at the high school level—who were not sure whether students can be excused is concerning. Meanwhile, only a handful of teachers said that their schools grant students exceptions from participating. Six percent of teachers said that any student can abstain from participating in drills, 4 percent said that exemptions are restricted to certain categories of students (we do not know which ones), and 1 percent said that students in certain grades are exempt.

Per NASP, Safe and Sound Schools, and NASRO guidelines, exemptions from drills are appropriate as long as schools have alternative methods to teach students the skills necessary to respond effectively to active assailant emergencies. Teachers' responses, however, suggest that this is not the case in practice. Only 4 percent of teachers indicated that their schools have alternative methods to teach response skills outside drills. Importantly, these were *not* the same teachers who indicated that any students in their schools could be exempt from participating in drills. In other words, teachers' responses suggest that not only are alternative methods to drills rarely available but also that alternatives are rarely available even in the uncommon cases in which schools grant any students an abstention from participating in drills.

Interestingly, more teachers in low-poverty schools (43 percent) and schools serving mostly White students (44 percent) said that their schools give advanced notice of active shooter drills to both teachers *and* students, relative to their counterparts in high-poverty schools and schools serving mostly students of color (28 percent and 30 percent, respectively). Similarly, teachers in schools serving mostly White students were also more likely to indicate that their schools provide advanced notification to parents about drills (30 versus 23 percent, respectively). Teachers in low-poverty schools and schools serving mostly White students were also slightly more likely than their counterparts in high-poverty schools and schools serving mostly students of color to indicate that certain categories of students can abstain from drills. Taken together, these findings suggest that low-poverty schools and schools serving mostly White students are involving parents and students in advance of drills to a greater degree than their counterparts.

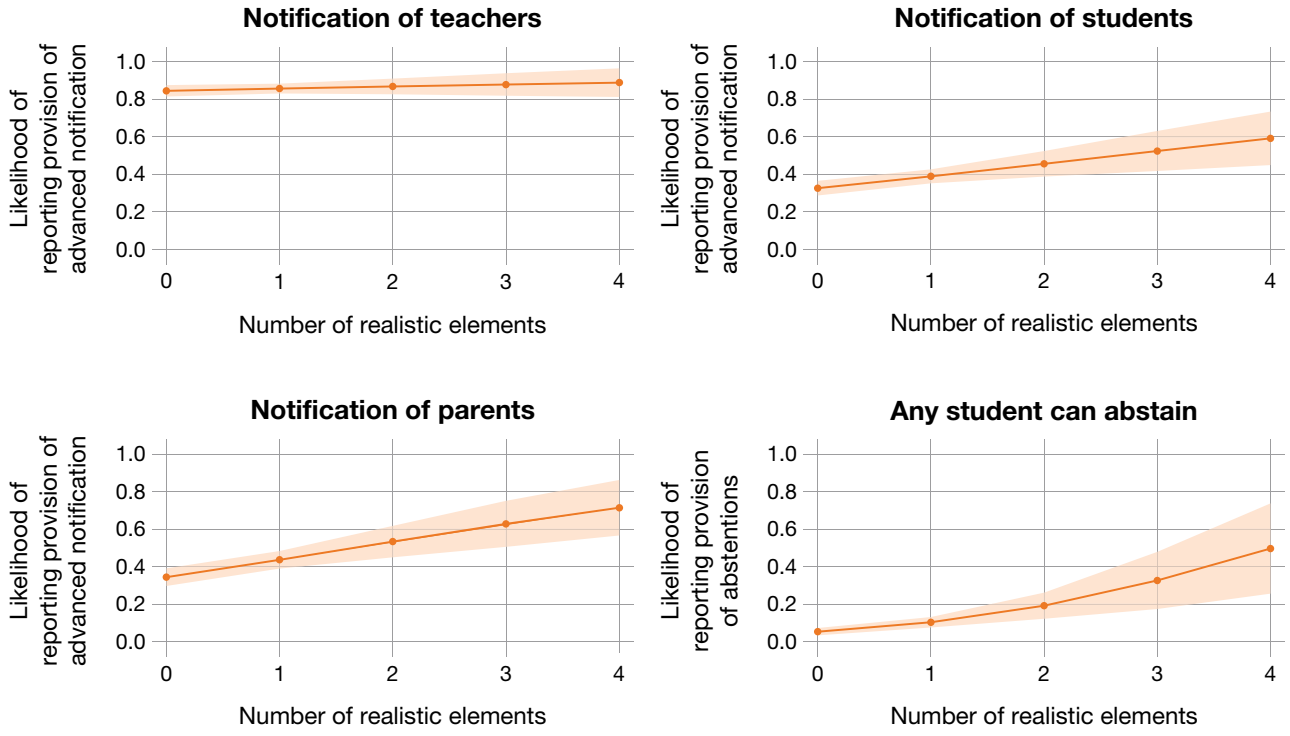
Schools Are More Likely to Give Advanced Warning and Allow Students to Opt Out When Drills Include More Realistic Elements

We hypothesized that schools' likelihood of providing advanced notice of drills to teachers, parents, and students, as well as their willingness to allow students to abstain from participating in drills, were related to the number of realistic elements in schools' drills. That is, we suspected that schools that use more or certain realistic elements might be more likely to notify participants in advance and/or to allow students to opt out of drills. Although we caution that our sample sizes are small for this analysis because so few schools used realistic elements in their drills in the 2023–2024 school year, we generally found evidence to support our hypothesis.

As shown in Figure 7, teachers' likelihood of saying that their schools notify students and parents in advance of active shooter drills increases as the number of realistic elements included in these drills also increases. For example, in schools whose drills did not include any realistic elements, teachers' likelihood of indicating that their schools notified parents in advance was about 0.35. But once schools included two or more realistic elements in their drills, teachers' likelihood of indicating that

FIGURE 7

Association Between the Number of Realistic Elements Included in Drills and the Provision of Advanced Notification and Student Abstentions



NOTE: This figure depicts response data from the following survey questions: "What elements are included in the drills to prepare for school shootings at your school?" "Are certain students at your school exempt from or given the choice to opt out of participating in drills to prepare them for school shootings?" "Does your school provide advanced notice to teachers and students when planning drills designed to prepare them for school shootings?" and "Is your school required to notify parents in advance of drills designed to prepare students and school staff for school shootings?" (n = 860). The figure shows margins from a logistic regression model predicting teachers' likelihood of indicating that their schools provide advance notification to parents, teachers, and students or that any student can abstain from drills as a function of the number of realistic elements used (the sounds of real gunfire, sounds of explosions, police officers or other uniformed security personnel inside the school, police officers or other security personnel firing blanks inside the school, prop or toy firearms, and/or fake blood). Controls include school demographics (grade level, size, poverty level, student racial and ethnic composition, locale) and history of gun violence incidents in the last five years as self-reported by the respondent. This figure excludes teachers who did not know if parents were notified in advance of drills and/or did not know whether certain students at their schools could be exempt from drills. Orange shading represents the 95-percent confidence intervals around each estimate.

their schools notified parents in advance increased to about 0.50.

We observed this same association for abstentions, too: As the number of realistic elements included in drills increased, teachers' likelihood of indicating that their schools grant abstentions for any students not wishing to participate increases. The exception to this relationship occurs in the notification of teachers; teachers are highly likely to be notified of drills in advance regardless of how many realistic elements these drills contain.

Do Teachers Perceive That Drills Increase Their and Their Students' Sense of Preparedness and Safety?

As described above, prior research has provided mixed evidence about the extent to which drills are positively associated with students' and teachers' feelings of preparedness and safety at school. Some prior work has found that drills can reduce student fear in school settings, including among youth who have been exposed to violence at school (Schildkraut and Nickerson, 2022; Schildkraut et al., 2023). Studies have also shown that lockdown drills can have measurable effects on preparedness and that lockdowns used in real-world events, such as mass school shootings, do have protective effects (see, e.g., Schildkraut et al., 2023; Schildkraut and Nickerson, 2020). Other research, however, finds that these safety practices may actually decrease student perceptions of feeling safe at school and can be especially difficult for children with varied learning disabilities or for neurodivergent youth (Jackson and Golini, 2024). Studies using interviews with school counselors have found that students experience significant anxiety and fear in the aftermath of drills, and some family members may experience similar reactions (Goodman-Scott and Eckhoff, 2020). Surveys of youth who have been involved in lockdown drills also show that drills make most of them (60 percent) feel "scared and hopeless" (Moore-Petinak et al., 2020).

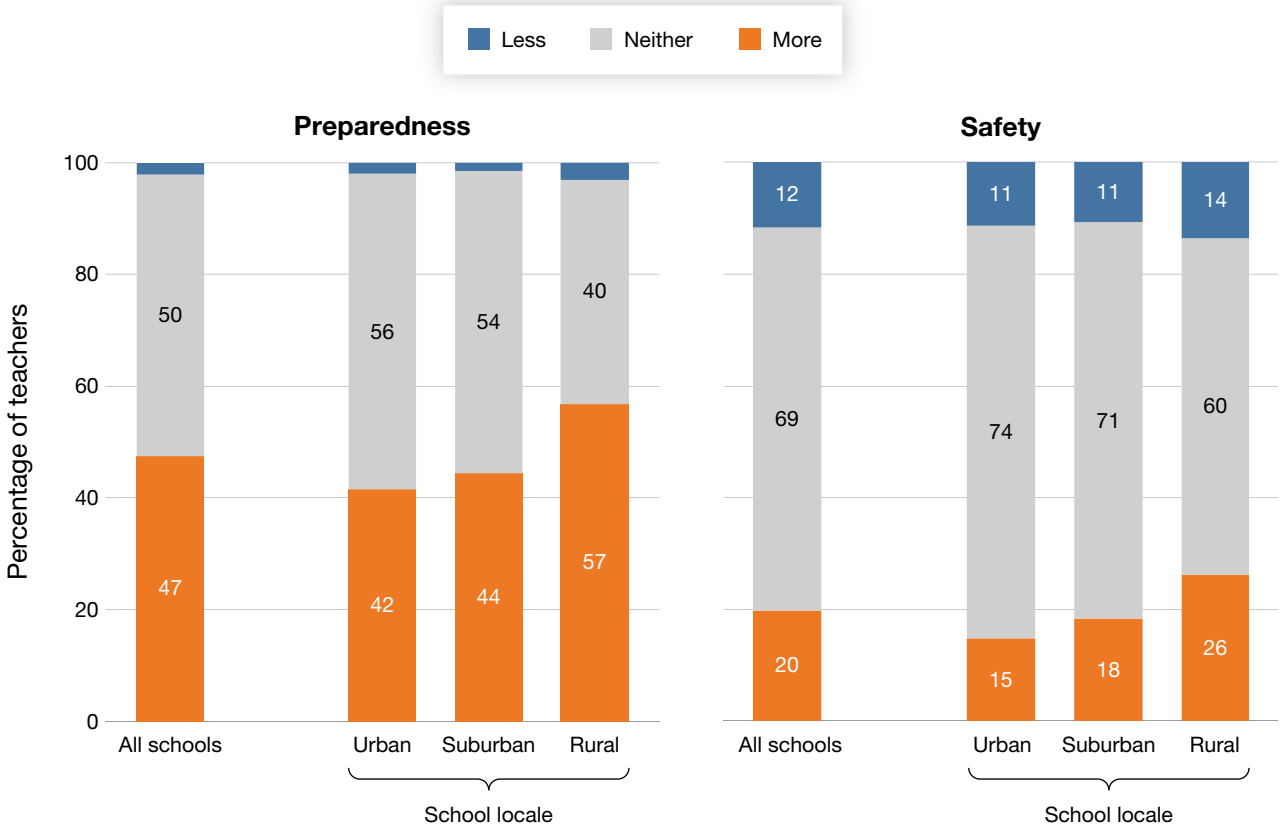
We asked teachers in our survey about their perceptions of whether participation in drills might influence their and their students' feelings of preparedness and safety at school. In the next section, we present results from these survey items. We first investigate teachers' perceptions of how drills influence their own feelings of preparedness and safety at school. We then focus on teachers' perceptions of how these drills affected their students. We caution readers from overinterpreting these findings, particularly the results concerning student perceptions of safety and preparedness. Specifically, teachers' perceptions may or may not align with students' actual experiences, and we did not directly ask students how they felt. Furthermore, our results are based on a survey of teachers, and thus, our analyses do not allow for causal interpretation of relationships.

Teachers Are Split over Whether Drills Make Them Feel More Prepared or Have No Impact on Their Sense of Preparedness or School Safety

We asked teachers whether the drills in which they took part during the 2022–2023 school year made them feel more or less prepared to respond to an active shooter incident at their schools—the main objective of such drills. As shown in Figure 8, we observed a stark division in teachers' perceptions about whether drills made them feel more prepared. Specifically, roughly half of teachers (47 percent) said that the drills make them feel *more* prepared to respond to an active shooter incident. But most other teachers (50 percent) said that they felt *neither* more nor less prepared after participating in drills, meaning that they perceive the drills to have no impact on their sense of preparedness. Notably, virtually no teachers (only 2 percent) said that they felt *less* prepared after participating in drills.

We observed a slightly different story when we asked teachers for their perceptions of how drills influenced their feelings of school safety. Overall, teachers were more unified when we asked them about the relationship between drills and perceptions of safety. A solid majority of teachers (69 percent) felt that drills had no influence on their sense of school safety. However, the minority of teachers (31 percent) who felt there was a relationship between drills and perceptions of safety were split over whether drills

Figure 8
Percentage of Teachers Who Indicated That Drills Made Them Feel More or Less Prepared or Safe, by School Locale



NOTE: This figure depicts response data from the following survey questions: "Did the drill(s) in which you took part make you feel more or less prepared about responding to an active shooter incident?" and "Did the drill(s) in which you took part make you feel more or less safe at school?" (*n* = 897).

affected them positively or negatively: Twenty percent of teachers said that participating in drills made them feel *more* safe at school, while 12 percent said drills made them feel *less* safe at school.

When we investigated how teacher-level characteristics, school demographics, and a school district's history of gun violence contributed to teachers' perceptions of whether drills made them feel more or less safe and prepared, we observed the strongest relationship by school locale. As shown in Figure 8, a greater share of rural teachers than urban teachers (57 percent versus 42 percent, respectively) reported that active shooter drills made them feel more prepared to respond to an active shooter incident. Similarly, a greater share of rural teachers than urban teachers (26 percent versus 15 percent, respectively) reported that active shooter drills made them feel safer at school.

We hypothesize that several dynamics might be contributing to these patterns. First, gun violence (and other lesser forms of violence) have historically been concentrated in urban settings (Burr, Kemp, and Wang, 2024; U.S. Government Accountability Office, 2020). Rural teachers may be less concerned about the possibility of violence from guns or otherwise in their schools and, therefore, might generally feel a greater sense of preparedness and safety regardless of whether they participate in school safety training and drills. Second, rural teachers might have greater confidence in their ability to deal with gun violence in their schools. Gun ownership rates are higher in rural areas, relative to urban and suburban

locales (Schleimer et al., 2023; Igielnik, 2017), which might mean that rural teachers are more accustomed to and comfortable with the presence of firearms at large. Teachers working in rural schools have also expressed a greater willingness to carry firearms at school if allowed to do so (Jackson et al., 2023), which also lends credence to this claim.

Most Teachers Perceive Drills as Positively Affecting Students' Sense of Preparedness, but They Are More Split over How Drills Affect Students' Sense of Safety at School

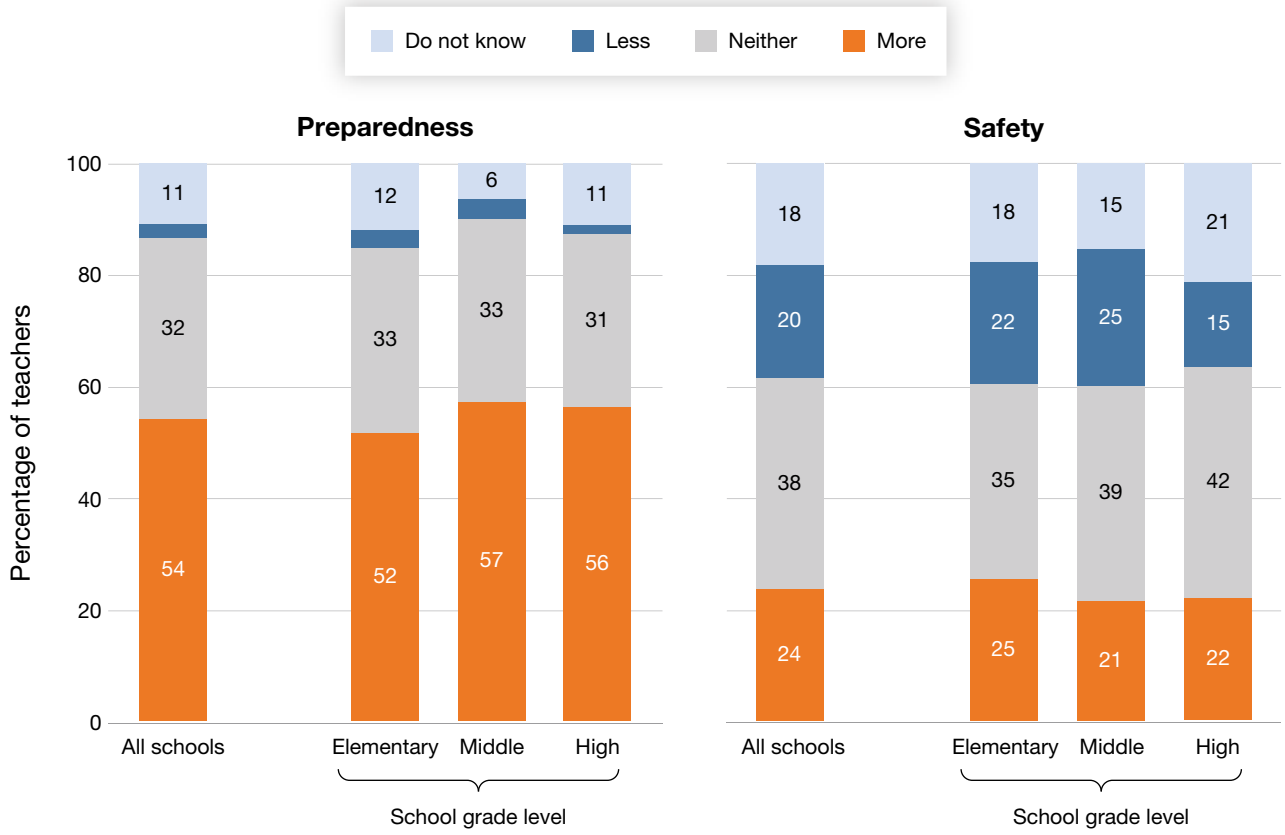
We also asked teachers for their perceptions of how drills affected students' feelings of preparedness and safety at school. Unlike our survey questions that asked teachers about their own perceptions, we offered them the option to respond that they were not sure how drills were associated with students' feelings of preparedness and safety.

As shown in Figure 9, a small majority of teachers (54 percent) perceived that participating in active shooter drills made students feel more prepared to respond to an active shooter incident. Meanwhile, one-third of teachers perceived that drills had no impact on students' feelings of preparedness, and a small number (3 percent) perceived that drills made students feel less prepared. Notably, 11 percent of teachers were not sure how drills affected students' feelings of preparedness.

There was less consensus among teachers about how active shooter drills affected students' feelings

FIGURE 9

Percentage of Teachers Who Indicated That Drills Made Their Students Feel More or Less Prepared or Safe, by School Grade Level



NOTE: This figure depicts response data from the following survey questions: "Do you think drills make students feel more or less prepared about responding to an active shooter incident?" and "Do you think drills make students feel more or less safe at school?" (n = 897).

of safety. A plurality of teachers (38 percent) reported that active shooter drills made students feel neither more nor less safe at school. Meanwhile, roughly one-quarter of teachers (24 percent) said that active shooter drills made students feel *more* safe at school, and a similar share (20 percent) said that active shooter drills made students feel *less* safe at school. However, nearly one-fifth of teachers (18 percent) were not sure how active shooter drills affected students' feelings of safety.

We had hypothesized that teachers at different grade levels might have different feelings about whether drills were associated with students' feelings of preparedness and safety; teachers might have different opinions about the appropriateness or effectiveness of drills for students of different ages. However, we generally did not find this to be the case. We observed the same overall pattern in teachers' perceptions regardless of school grade level.

In summary, teachers generally perceived that active shooter drills positively affected students' feelings of preparedness or—at worst—had no impact at all. However, teachers disagreed over whether active shooter drills had any association with students' feelings of safety at school and, if so, whether this association was positive or negative.

About Three in Ten Teachers Are Concerned That Drills Have Negatively Affected Students' Mental Health

Nationally, 29 percent of teachers said that they were aware of students at their schools who experienced trauma or heightened anxiety and stress following their participation in a drill designed to prepare them for school shootings. Twelve percent of teachers said that this happened once, and 17 percent of teachers said this happened more than once at their schools. Only a minority of teachers (21 percent) were sure that such impacts to students' mental health had definitely not been a problem in the aftermath of drills. Importantly, however, 50 percent of teachers were not sure whether any such impacts had happened in their schools.

With the caveat that many teachers may simply not have known whether their students were experiencing trauma or heightened anxiety and stress following drills, we found that teachers' likelihood of reporting student anxiety and stress depended on school grade level and the frequency of drills. Elementary and middle school teachers were more likely than their counterparts in high schools to indicate that their schools have had incidents of students experiencing trauma or heightened anxiety and stress in the aftermath of active shooter drills: 34 percent of elementary teachers and 31 percent of middle school teachers reported being aware that such impacts on students' mental health had happened at least once at their schools, compared with 21 percent of high school teachers. Teachers in schools that had more than one drill in the 2022–2023 school year were also more likely to report awareness that students at their schools had experienced trauma: 31 percent of teachers in schools that had multiple active shooter drills in the 2022–2023 school year reported such awareness, compared with 24 percent of teachers in schools that had only one drill. After controlling for school demographics, a district's history of gun violence, and the number of drills conducted, we also observed a positive association between the number of realistic elements included in drills and teachers' likelihood of indicating that at least one student at their school had experienced trauma or heightened anxiety and stress following participation in a drill.

Finally, teachers' responses suggest that the provision of mental health supports in the aftermath of drills to support students' well-being is rare—only one in ten teachers (10 percent) said that their schools provide this type of support to students after the completion of drills. Although we do not know the specifics of what these mental health supports look like, presumably they would include opportunities for students to speak with mental health professionals (per NASP, Safe and Sound Schools, and NASRO [2021] guidance). We generally did not observe significant differences in the percentage of teachers who indicated that their schools provide mental health supports after the conclusion of drills—with one exception: Middle school teachers were more likely than elementary school teachers to indicate that their schools provided such supports (15 percent versus 7 percent, respectively). Meanwhile, 10 percent of high school teachers said that their schools provide such supports.

Notably, after controlling for school demographics and a school district's history of gun violence, teachers in schools whose drills contain realistic elements—that is, drills that we expect might be especially traumatizing to students—were no more likely than their counterparts in schools that implemented drills without realistic elements to report that their schools provide mental health supports.

Discussion and Implications

While mass shooting incidents remain relatively rare at K–12 schools across the United States compared with other types of crime and violence, our survey results show that as many as one in six teachers nationally work in districts that have experienced gun violence incidents. And approximately 1 percent of teachers work in districts that have experienced mass shooting events in the last five years. Perhaps as a result, the potential for an active shooter incident to occur still ranks low on the list of teachers' top safety-related concerns, even if a small number of teachers still rank the possibility of such violence as their most significant concern. Unfortunately, our survey results also reveal that teachers perceive that schools are becoming generally less safe, relative to the 2022–2023 school year. Female teachers are especially worried that they will be victims of an attack at their schools.

As part of broader school safety efforts, K–12 schools continue to implement lockdown drills throughout the school year. The ultimate objective of these drills is to better prepare the school community in the event of an actual attack. Our survey of nearly 1,000 teachers conducted in the fall 2023 suggests that schools are—at least for the most part—implementing such drills in accordance with some of the guidance provided by such organizations as NASP, Safe and Sound Schools, and NASRO. Our survey results also suggest that schools generally agree on the specific actions that should be taken during such drills, such as locking classroom doors, shutting off lights, hiding out of sight of doors and windows, and staying silent. Beyond this, our survey revealed three key takeaways about active shooter drills in K–12 schools.

First, the good news: **most schools are not integrating the types of realistic, sensorial elements into their drills that have been shown to aggravate psychological risks among students and that lead to other negative unintended consequences** (Miotto and Cogan, 2023; Schonfeld et al., 2020). Instead, most schools have focused on implementing nonsensorial drills that avoid simulation-like exercises. This finding is encouraging and suggests that guidance and protocols published by such national associations as NASRO, Safe and Sound Schools, and NASP, as well as such organizations as the I Love U Guys Foundation, are being put into practice. It also suggests that schools are converging around a set of best practices that are less likely to induce trauma, stress, and anxiety among members of the school community.

Second, the not-so-great news: **while most schools are implementing nonsensorial drills, most still do not provide adequate resources, such as adult monitoring and mental health services prior to, during, and after drills, and also do not notify students (and parents) of upcoming drills.** The absence of key supports and the infrequency with which schools are providing students and caregivers early notification of such events elevate the potential for drills to have detrimental impacts on student well-being, increase fear of being at school, and potentially also increase avoidance behaviors as a way of combating that fear (see, e.g., Schildkraut and Nickerson, 2022). Moreover, although some schools appear to be taking steps to develop age-appropriate drills, they are less likely to account for such factors as physical and developmental disabilities, prior traumatic experiences, and emotional challenges in the design and implementation of their drills. Research shows, however, that such actions can be especially difficult for neurodiverse individuals and those with learning disabilities, who may not have the executive and other skills and capacities needed to follow instructions and cope with the potential impact of drills, especially when they come as a surprise (Jackson et al., 2024).

Ultimately, findings from our survey highlight the need for more standardized practices *in support of* drill implementation. Improvements can be made in the planning and notification processes and in building the capacity of school staff to better sup-

Improving teachers' perceptions of school safety could help address some of the issues that K–12 schools are facing with teacher well-being, at least in part.

port a diverse student base with diverse needs. While those traditionally engaged in emergency planning at schools—such as administrators and dedicated safety personnel, as well as local police and first responders—should continue to be heavily involved in planning drills, schools should also consider how other key stakeholders, such as school psychologists and counselors, might provide critical input into the planning process and help better anticipate the needs of all participants. Announcements to parents and students alike (as well as to school staff) should make drill participants aware of planned drills and provide reminders that they will not be responding to a real emergency. Schools might also consider providing additional professional development opportunities for school staff in preparation for drills—for instance, to teachers and paraprofessionals who work closely with students who have heightened emotional and other needs.

Finally, the mixed news: **drills do not necessarily seem to be positively influencing perceptions of preparedness and safety among teachers and possibly not among students either.** Our survey results show that while drills do not appear to be *lowering* teachers' perceptions of preparedness, they are also not *raising* them as much as we, as researchers, might like, given their frequency and ubiquity. While drills focus on enhancing preparedness and the actions practiced during such events have, in fact, been shown to have tangible, protective effects during real-world emergencies (Schildkraut et al., 2023; Schildkraut and Nickerson, 2020), raising perceptions of *safety* is equally as important. Given rising levels of fear of victimization among U.S. teachers—as well as fears that their students will be victims of violence—improving perceptions of school safety should be a policy objective in its own right, in addition to improving physical safety itself. As other recent survey-based research has shown, as much as 13 percent of teachers nationwide said that school-safety concerns are among their reasons for thinking about leaving the profession (Doan et al., 2023). Improving teachers' perceptions of school safety could help address some of the issues that K–12 schools are facing with teacher well-being, at least in part.

Future Research

We conclude with several recommendations for future research directions on the broad topic of school emergency preparedness drills:

- The practice and policy community would greatly benefit from deeper dives, perhaps via additional survey- and interview-based research, into the supports that schools are providing before, during, and after drills and how these supports might affect teachers' perceptions of preparedness and safety. Such research should also include issues around advanced notification of drills. Questions might include the following: What does specific messaging included in early announcements about drills look like? What opportunities are schools creating for holding debrief sessions after drills? Are schools adding monitors to drills to ensure the emotional and mental well-being of all participants? If so, how are these monitors engaging students and staff? Are schools making mental health counselors available before and after drills or providing other types of individualized or group support? How are these

supports contributing to perceptions of safety and preparedness?

- Relatedly, future work should identify opportunities to directly survey broad cross sections of students from across the country to learn more about these issues and get a better big-picture view of drill implementation and impact. Most existing research about active shooter and other emergency preparedness drills in U.S. schools is based on samples of students from specific schools or states, as opposed to nationally representative populations. Such surveys could continue to focus on perceptions of both preparedness and fear, and how various implementation practices (e.g., early notification, supports, specific response protocol) affect these perceptions, while exploring deeper into how student demographics, exposure to violence at school and in the community, and other factors might interact with school safety drills to affect perceptions of safety in particular.
- As others studying these topics have noted, more research is needed around the differential impacts of various response protocols (e.g., options-based responses such as ALICE Training and run-hide-fight versus discussion-based approaches that use tabletop exercises) on safety outcomes (including perceptions). Our survey questions did not ask teachers what form of active assailant drills were implemented at their schools, yet it is likely that different models will have different impacts on perceptions of safety and preparedness (in addition to potentially also affecting actual preparedness). Future research should also attempt to assess the impact of drills as part of broader school safety efforts, which will also include broader violence prevention initiatives, physical security measures that protect schools from attack and mitigate the impacts of attack, and other response and recovery efforts that fall under the scope of emergency preparedness. Taking a holistic look at approaches to school safety can further help identify what is working and what is not, the state of perceptions around safety and preparedness, and how various initiatives work together to keep students and staff safe at school.
- Finally, we need more research to identify inclusive options for drill implementation, as well as alternatives to drills, to meet the needs of students with prior trauma and other special needs while leaving them as prepared as others to respond to emergency situations. A current approach for students with autism spectrum disorder includes turning drills into a game (e.g., hide-and-seek), but other than that, there is little guidance on what can help children with these and other disabilities get through a drill. Drill exemptions are also likely important to ensuring the well-being of children, provided that schools and their partners can design and implement alternative, trauma-informed approaches to preparing students to respond to tragic incidents.

Survey Methods and How We Conducted This Analysis

Our methodology for analyzing survey data remains consistent between survey waves. Therefore, the description of our methods below simply updates language from a previous RAND report (Jackson et al., 2023).

The analyses presented in this report are based on survey items administered online via RAND's American Teacher Panel (ATP) between October 11, 2023, and November 7, 2023. Survey items were designed in-house by RAND researchers and shaped by prior work on school physical security and emergency drills.

These school safety items were administered as a module as part of a larger survey effort. To achieve a target number of 1,000 complete responses, 2,000 K–12 teachers who are members of the ATP were randomly sampled to be invited to complete the survey. A supplementary sample of 500 teachers was also invited later in the survey administration period to increase the number of complete responses. Invited teachers received up to four reminder emails to participate, and teachers received a $15 incentive on completion of the survey. In total, 1,020 teachers completed enough of the survey to receive a weight and are included in the final data file (for a 41.5 percent completion rate). Of these, 1,006 teachers completed at least one item in the school safety module, and their responses are included in the analysis presented in this report.

Teachers' survey responses have been weighted to be representative of the national population of public school teachers. We briefly describe our sampling and weighting process below; for more information on the ATP's sampling and weighting methods, see Robbins and Grant (2020). Teachers are recruited into the ATP using probability-based sampling methods in which the sampling frame is a list of U.S. public school teachers purchased from Market Data Retrieval, a market-research firm specializing in education. For this particular survey—which targeted the K–12 public school teacher population—the ATP served as the sampling frame, with panelists invited to participate selected using probability-based sampling methods.

The survey weights account for this multistep sampling process and for teachers' likelihood of completing the survey. Specifically, the final weights used in our analysis are the product of three weights: a calibrated sampling frame weight, a sample selection weight, and a survey response weight. The sampling weights were designed to make the panel match the national population of public school teachers, taking into account several school-level characteristics (e.g., school size, grade level, locale, sociodemographics) and individual teacher–level characteristics (e.g., gender, education, experience). The survey response weights estimate teachers' likelihood of responding to the survey conditional on school- and individual-level characteristics. As shown in Table S.1, both before and after weighting, survey respondents look similar to the population of U.S. public school teachers.

Because teachers' experiences vary, we examined differences in teachers' responses by various teacher-level characteristics (gender, race/ethnicity, years of experience) and school-level characteristics (grade level, enrollment size, locale, poverty level, and student racial and ethnic composition). We obtained data on school demographics by linking survey data files to the Common Core of Data issued by the NCES. We explored the following categories (response options are in parentheses):

- gender (*female* and *male*, which was self-reported by the respondent)
- race (*White*, *Black*, *Hispanic*, and *other*, which was self-reported by the respondent)
- school grade level (*elementary*, *middle*, and *high*)
- school locale (*urban*, *suburban*, and *rural*)[A]
- school student racial and ethnic composition (schools in which more than half of students were Black, Hispanic, Asian, Pacific Islander, American Indian/Alaska Native, or of two or more races were categorized as having *a majority of students of color*, with the remaining schools categorized as having *a majority of White students*.)
- school poverty level (schools in which half or more of students qualify for FRPL were categorized as *high poverty*, whereas the remainder were categorized as *low poverty*.)
- school enrollment size (schools with fewer than 450 students were categorized as *small*, whereas the remainder were categorized as *large*).

In this report, we describe only those differences among teacher subgroups that are statistically significant at the 5-percent level, unless otherwise noted. Because of the exploratory nature of this study, we did not apply multiple hypothesis test corrections.

[A] Our definition of school locale aligns with the four-category definition used by the NCES, with the exception that we collapsed the districts located in towns into the rural category for sample size reasons.

Study Limitations

We highlight two key limitations of our study. First, although our survey asked teachers about their perceptions of students' feelings of safety and preparedness in response to drills, we did not directly survey the K-12 student population. Therefore, our survey results do not provide direct insight about students' actual experiences with drills or whether these drills make them feel more or less prepared and safe. Second, because our survey was only fielded to a nationally representative sample of teachers, we are able to provide only teacher-level estimates about the trends addressed in the study. Our sample of teachers was not sufficiently large to produce reliable district-level estimates. It is also likely that some of the teachers in our sample work in the same district and, possibly, the same school. Throughout our report, we are thus careful to report statistics as a "share of teachers that experienced *X*," and we do not make any claims about the share of districts experiencing particular dynamics.

TABLE S.1

Sample Characteristics Before and After Weighting Compared with the National Population of K–12 Public School Teachers

Characteristic	Unweighted Survey Sample	Weighted Survey Sample	National Population
School locale			
Urban	29.7	29.1	29.1
Suburban	38.3	38.7	38.5
Town/rural	32.0	32.2	32.4
School percentage of students eligible for FRPL			
0%–50%	57.4	55.6	55.6
50%–100%	42.6	44.4	44.4
School percentage of students of color			
0%–50%	47.5	48.3	48.2
50%–100%	52.5	51.7	51.8
School grade level			
Elementary	48.1	47.9	47.9
Middle	21.7	19.8	19.8
High	30.2	32.3	32.3
School size			
Small (fewer than 450 students)	30.8	29.3	29.3
Large	69.2	70.7	70.7
Teacher race/ethnicity			
White	82.0	80.8	80.7
Hispanic	9.2	9.5	9.5
Black	6.2	6.6	6.6
Other	2.6	3.2	3.2
Teacher gender			
Female	76.6	76.6	76.6
Male	23.4	23.4	23.4
Teacher years of experience			
0–9 years	26.6	36.0	36.2
10 or more years	73.4	64.0	63.8

SOURCES: Authors' analysis of data from NCES, 2023b (teacher population data from the 2020–2021 National Teacher and Principal Survey) and from NCES, 2022 (school-level characteristics from the 2021–2022 Common Core of Data).

Appendix

In this appendix, Tables A.1 through A.19 provide basic frequency tabulations for each survey item administered as part of the school safety module of the fall 2023 ATP survey. All survey estimates have been weighted to be representative of the national population of K–12 public school teachers. Because survey data involve uncertainty, we include confidence intervals for each survey estimate.

TABLE A.1

Which of the Following Do You Think Currently Poses the Largest Safety Concern at Your School?

Response Option	Weighted Percentage	Confidence Interval
Bullying and cyberbullying	46.3	43.1, 49.5
Student fights	12.9	10.9, 15.3
Violence against teachers and other school staff	8.9	7.2, 11.0
Active shooter	5.9	4.6, 7.7
Acts or ideations of self-harm	5.7	4.4, 7.4
Weapons in school	1.7	1.1, 2.7
Sexual harassment and assault	1.4	0.8, 2.4
Drugs	11.0	9.1, 13.2
Other crimes (e.g., theft, vandalism)	6.2	4.8, 7.9

NOTE: Because of rounding, weighted percentages do not sum to 100 percent. *n* = 1,006.

TABLE A.2

Are You Afraid of Being the Victim of Attack or Harm at Your School?

Response Option	Weighted Percentage	Confidence Interval
Yes	23.8	21.1, 26.7
No	76.2	73.3, 78.9

NOTE: *n* = 1,005.

TABLE A.3

Are You Afraid That Students at Your School Will Be the Victims of Attack or Harm?

Response Option	Weighted Percentage	Confidence Interval
Yes	47.1	48.8, 50.3
No	52.9	49.7, 56.2

NOTE: *n* = 1,005.

TABLE A.4

At Any Point over the Last Five School Years, Including This School Year (i.e., Since 2019–2020), Has Your School or Another School in Your District Experienced Any of the Following Incidents?

Response Option	Weighted Percentage	Confidence Interval
A mass school shooting (where 4 or more individuals were killed or injured)	1.0	0.5, 1.9
A gun violence incident that is not a mass shooting	15.6	13.4, 18.0
A student or school staff suicide	36.9	33.9, 40.1
An extreme weather or natural disaster emergency that caused closure for longer than 5 consecutive school days (e.g., a hurricane, tornado, wildfire, flood, earthquake)	18.0	15.6, 20.6
A bomb threat or other threat of violence	43.7	40.5, 46.9
I did not experience any of these incidents in the last five school years.	32.2	29.3, 35.3

NOTE: Respondents were instructed to select all that apply. *n* = 1,004.

TABLE A.5

Following the Incident(s) You Selected, Did You Experience Any of the Following?

Response Option	Weighted Percentage	Confidence Interval
Heightened rates of absenteeism among students	46.3	42.4, 50.2
Lags in student grades and/or test scores	26.9	23.5, 30.6
Heightened stress and/or anxiety among students	70.5	66.8, 73.9
Decreased feelings of safety at school among students	45.4	41.5, 49.3
I don't know or I don't remember	17.0	14.3, 20.1

NOTE: Includes only respondents who indicated that their district experienced some type of incident in the last five years. Respondents were instructed to select all that apply. *n* = 680.

TABLE A.6

What Resources Did Your School or Another School in Your District Make Available in the Aftermath of the Safety-Related Incident(s) You Selected?

Response Option	Weighted Percentage	Confidence Interval
Mental health professionals to provide counseling to students and school staff	71.3	67.7, 74.8
Mental health professionals to provide counseling to families	26.0	22.7, 29.6
Guidance for teachers about how to create a calm and supportive environment for students	47.5	43.6, 51.4
Plans to reunify students with their parents and families	12.2	9.8, 15.1
A temporary space to continue in-person instruction	5.0	3.6, 7.0
Alternate educational programming (such as remote learning options) to continue instruction	12.5	10.2, 15.3
Guidance on handling commemorations, memorial activities, or other permanent markers/memorial structures	11.4	9.1, 14.2
My school did not make any resources available in the aftermath of safety-related incidents	8.2	6.3, 10.7
Other	1.3	0.7, 2.5
I don't know or I don't remember	8.6	6.6, 11.1

NOTE: Includes only respondents who indicated that their district experienced some type of incident in the last five years. Respondents were instructed to select all that apply. *n* = 680.

TABLE A.7

In the Last School Year (2022–2023), Did You Take Part in Active Shooter, Active Assailant, or Other Drill(s) at Your School or School District Designed to Prepare for School Shootings?

Response Option	Weighted Percentage	Confidence Interval
Yes, more than once	62.3	59.1, 65.4
Yes, once	27.6	24.8, 30.6
No	10.1	8.4, 12.2

NOTE: Includes only respondents who indicated that their district experienced some type of incident in the last five years. Respondents were instructed to select all that apply. *n* = 1,004.

TABLE A.8

Did the Drill(s) in Which You Took Part Make You Feel More or Less Prepared About Responding to an Active Shooter Incident?

Response Option	Weighted Percentage	Confidence Interval
More prepared	47.5	44.1, 50.9
Neither more nor less prepared	50.4	47.0, 53.8
Less prepared	2.1	1.3, 3.5

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). *n* = 897.

TABLE A.9

Did the Drill(s) in Which You Took Part Make You Feel More or Less Safe at School?

Response Option	Weighted Percentage	Confidence Interval
Less safe at school	11.7	9.7, 14.2
Neither more nor less safe at school	68.5	65.3, 71.6
More safe at school	19.8	17.2, 22.6

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). *n* = 896.

TABLE A.10

Do You Think Drills Make Students Feel More or Less Safe at School?

Response Option	Weighted Percentage	Confidence Interval
Less safe at school	20.1	17.5, 23.0
Neither more nor less safe at school	38.1	34.8, 41.5
More safe at school	23.5	20.8, 26.5
I don't know	18.3	15.8, 21.1

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). *n* = 897.

TABLE A.11

Do You Think Drills Make Students Feel More or Less Prepared About Responding to an Active Shooter Incident?

Response Option	Weighted Percentage	Confidence Interval
Less prepared	2.7	1.9, 4.0
Neither more nor less prepared	32.3	29.2, 35.7
More prepared	54.2	50.8, 57.6
I don't know	10.7	8.7, 13.0

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). Because of rounding, weighted percentages do not sum to 100 percent. *n* = 897.

TABLE A.12

What Actions Are Students at Your School Instructed to Take During Drills to Prepare Them for School Shootings?

Response Option	Weighted Percentage	Confidence Interval
Lock classroom doors	90.8	88.6, 92.6
Barricade classroom doors	49.4	46.0, 52.8
Shut off classroom lights	88.2	85.9, 90.2
Hide in a designated space inside the classroom	85.9	83.3, 88.0
Stand out of view of windows and/or doors	88.8	86.5, 90.8
Remain silent	95.5	93.9, 96.7
Jump out of classroom windows	15.9	13.6, 18.6
Fight back against an attacker by throwing objects	37.1	33.9, 40.5
Other	5.6	4.2, 7.3

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). Respondents were instructed to select all that apply. *n* = 896.

TABLE A.13

What Elements Are Included in the Drills to Prepare for School Shootings at Your School?

Response Option	Weighted Percentage	Confidence Interval
Sounds of real gunfire	5.7	4.3, 7.5
Sounds of explosions	1.3	0.7, 2.2
Police officers or other uniformed security personnel inside the school	44.1	40.7, 47.5
Police officers or other security personnel firing blanks inside the school	5.2	3.9, 6.8
Prop or toy firearms	4.0	2.9, 5.6
Fake blood	0.8	0.3, 1.7
None of these elements are included in drills at my school	54.6	51.2, 58.0

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). Respondents were instructed to select all that apply. *n* = 896.

TABLE A.14

Were the Drills in Which You Participated Designed to Address the Needs of Students in the Following Categories?

Response Option	Weighted Percentage	Confidence Interval
Students of different ages	40.4	37.1, 43.8
Students with physical disabilities	26.1	23.2, 29.1
Students with developmental disabilities	22.6	19.9, 25.5
Students with prior traumatic experiences	11.8	9.8, 14.1
Students with emotional challenges	15.9	13.6, 18.5
Other	4.9	3.6, 6.5
I don't know	49.0	45.6, 52.4

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). Respondents were instructed to select all that apply. *n* = 896.

TABLE A.15

Are Certain Students at Your School Exempt from or Given the Choice to Opt Out of Participating in Drills to Prepare Them for School Shootings?

Response Option	Weighted Percentage	Confidence Interval
Any student can abstain from participating in drills	5.9	4.5, 7.6
Certain categories of students may abstain for participating in drills	4.4	3.2, 6.0
Certain grades are exempt from participating in drills	0.6	0.3, 1.5
All students must participate in drills	57.9	54.5, 61.2
I don't know	32.0	28.9, 35.3

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). Respondents were instructed to select all that apply. *n* = 896.

TABLE A.16

Does Your School Provide Advanced Notice to Teachers and Students When Planning Drills Designed to Prepare Them for School Shootings?

Response Option	Weighted Percentage	Confidence Interval
Yes, to teachers but not students	49.0	45.6, 52.4
Yes, to both teachers and students	36.7	33.5, 40.1
No, for neither teachers nor students	14.3	12.1, 16.9

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). *n* = 896.

TABLE A.17

Is Your School Required to Notify Parents in Advance of Drills Designed to Prepare Students and School Staff for School Shootings?

Response Option	Weighted Percentage	Confidence Interval
Yes, parents are notified but are not asked to provide consent for their child to participate	26.7	23.8, 29.8
Yes, parents are notified and must provide consent for their child to participate	1.4	0.8, 2.5
My school does not notify parents of planned drills	42.4	39.0, 45.8
I don't know	29.6	26.5, 32.8

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). *n* = 895.

TABLE A.18

Which of the Following Resources Does Your School Provide to You to Support Students Who Are Participating in Drills?

Response Option	Weighted Percentage	Confidence Interval
Classroom or other discussion-based exercises prior to planned drills	48.2	44.8, 51.6
Adults monitoring the drills who are trained to remove students or others exhibiting signs of trauma	15.9	13.6, 18.6
Mental health supports after the completion of drills	9.8	8.0, 12.0
Alternative methods to teach response skills outside of drills	4.3	3.1, 6.0
My school does not provide any resources to students in advance of, during, or after drills	44.3	40.9, 47.7

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). Respondents were instructed to select all that apply. *n* = 896.

TABLE A.19

Are You Aware of Students at Your School Experiencing Trauma or Heightened Anxiety and Stress Following Participation in a Drill Designed to Prepare Them for School Shootings?

Response Option	Weighted Percentage	Confidence Interval
Yes, this has happened once following a drill	11.8	9.7, 14.1
Yes, this has happened more than once following a drill	16.9	14.5, 19.7
No, this has not happened following a drill	21.4	18.8, 24.4
I don't know whether this has happened following a drill	49.9	46.4, 53.3

NOTE: Includes only respondents who indicated that they took part in drills designed to prepare for school shootings in the last school year (2022–2023). *n* = 895.

Notes

1 Another prominent database that tracks shooting incidents at K–12 schools, the K–12 School Shooting Database (K–12 SSDB), recorded an even larger number of incidents by using different data collection procedures and inclusion criteria: 28.5 shooting incidents per month over approximately the same period, January 2023–April 9, 2024 (K–12 SSDB, undated). The K–12 SSDB does not track gun seizures at schools, regardless of whether they resulted in lockdowns.

2 This survey was also administered to RAND's American Teacher Panel (ATP).

3 The difficulty of converting the share of teachers who experienced a lockdown to the total number of lockdowns that occurred results from multiple teachers (including those likely in the survey sample) teaching in the same school and teachers not being evenly distributed across schools.

4 Our survey questions about the specific elements included in drills were based on guidance issued by the National Association of School Psychologists (NASP), Safe and Sound Schools, and the National Association of School Resource Officers (NASRO) around the factors that schools should consider when designing and implementing armed assailant drills (NASP, Safe and Sound Schools, and NASRO, 2021). This guidance focuses primarily on the importance of conducting nonsensorial lockdown drills that avoid such potentially traumatizing practices as simulation activities, and it also provides recommendations about other developmental and mental health considerations.

5 Additional detail about our weighting procedures and overall methodology are included in the "Survey Methods and How We Conducted This Analysis" section at the end of this report.

6 Some of the teachers in our sample may have newly entered the teaching profession during this period. Using available data, we were not able to exclude from our analysis those teachers who have not been teaching for five years. However, because shooting incidents are extreme incidents of violence and tend to receive significant media coverage, we would expect new teachers to be aware of incidents that had occurred in their school or district within the time frame that we asked about. Furthermore, teachers in the ATP can move between schools and/or districts and still remain in the ATP. We do not know how many teachers in our survey sample are still teaching in the same school that they were teaching in five years ago. Federal statistics show that about 8 percent of teachers move schools in a single school year (Taie and Lewis, 2023). This suggests that a nontrivial number of teachers in our sample had moved schools during the period that we asked about. For teachers who had moved, we do not know how these teachers responded to the survey question shown in Figure 2. They might have been thinking about whether their current schools had any incidents of gun violence in the last five years. Or they might have been thinking about whether they had taught in any schools over the last five years that have had gun violence incidents.

7 A *mass shooting* is typically defined as an incident in which at least three or four victims were shot and killed (or injured, by some definitions), not including the shooter. Some sources include domestic violence incidents, gang violence, and drug- or robbery-related violence, while others exclude these types of incidents. Our survey question asked whether teachers' districts had experienced a shooting in which four or more individuals were killed or injured.

8 We tested this finding using a regression framework. More specifically, we used a logistic linear probability model to estimate the likelihood of a teacher indicating that an active shooter posed the largest safety concern at their schools. We regressed this dummy indicator on another dummy indicator capturing whether the teacher indicated that their district experienced a "a mass school shooting (where 4 or more individuals were killed or injured)" and/or "a gun violence incident that is not a mass shooting" in the last five school years. We controlled for teacher-level demographics (e.g., sex, race/ethnicity, years of experience) that are likely related to a teacher's perception of school safety. We also controlled for school demographics (e.g., grade level, enrollment size, poverty status, and student racial/ethnic composition), which are likely associated with the prevalence of school shootings and other violent incidents at school (see, e.g., Burr, Kemp, and Wang, 2024). We also controlled for the districts' history of incidents of other threats and hazards (as self-reported by teachers), which we assume influence teachers' perceptions about the relative risk of an active shooter situation.

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Acknowledgments

We are grateful to the teachers who participated in this survey panel. Their willingness to share their experiences and dedicate time to answering our questions is invaluable to improving our understanding of timely issues and helping us better understand how to support educators in their hard work. We thank Julia Kaufman and Heather Schwartz for helping us craft our survey questions and other RAND colleagues for their contributions to this work: Brian Kim for serving as the survey manager and Gerald Hunter for serving as the data manager for this survey, and Tim Colvin, Roberto Guevara, and Julie Newell for programming the survey. Thanks to Joshua Snoke for producing the sampling and weighting for these analyses. We also greatly appreciate the administrative support provided by Tina Petrossian and AEP management provided by David Grant. We also thank Aaron Davenport and Carter Price for their reviews and feedback, which helped improve our work. Finally, we are grateful for Stephanie Lonsinger's editorial expertise and Beth Bernstein's efforts in overseeing the publication of this report.

About This Report

In this report, we present teachers' perceptions of school safety, particularly with respect to gun violence, and investigate teachers' experiences with drills designed to prepare students and staff for school shootings and other violent incidents. To do so, we analyzed the results of a fall 2023 survey administered via RAND's American Teacher Panel. The primary audiences for this research include school- and district-level administrators and school safety partners, as well as their community-based partners, such as local law enforcement organizations. School-related associations and stakeholder groups may also be interested in this report.

The American Educator Panels (AEP) are nationally representative samples of teachers, school leaders, and district leaders across the country. The panels are a proud member of the American Association for Public Opinion Research's Transparency Initiative. If you are interested in using AEP data for your own surveys or analysis or in reading other publications related to the AEP, please email aep@rand.org or visit www.rand.org/aep. Through the AEP Data Portal available from that site, researchers can download survey data files to perform their own analyses.

This research was sponsored by the Cybersecurity and Infrastructure Security Agency and conducted in the Infrastructure, Immigration, and Security Operations Program of the RAND Homeland Security Research Division (HSRD), which operates the Homeland Security Operational Analysis Center (HSOAC).

This report presents the results of research and analysis conducted under 70RCSJ22FR0000005, "K–12 School Security Doctrine Development–Social Media Response Guidance (2022–2023)."

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This research was published in 2024.