Effectiveness and Psychological Impact of Active Assailant Lockdown Drills in Maryland Schools

SY 2024-2025 Technical Report

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Executive Summary

The Maryland Center for School Safety (MCSS), in collaboration with the National Center for School Mental Health (NCSMH) at the University of Maryland School of Medicine, conducted the first statewide study on the effectiveness and psychological impact of active assailant lockdown drills in Maryland public schools. This work was mandated under House Bill 416 (Chapter 182, 2024), which requires both an annual literature review and a data-driven study to guide the state's implementation of trauma-informed, developmentally appropriate drill practices.

Legislative and Theoretical Foundations

House Bill 416 emphasizes trauma-informed, culturally responsive, and equitable implementation of lockdown drills. To meet this requirement, the project team conducted a comprehensive literature review, grounding the work in trauma-informed care and culturally responsive, anti-racist, and equitable (CARE) practices. The review highlighted variability in drill practices, limited evidence on effectiveness, and potential psychological harm of poorly designed drills, especially for younger students, students with disabilities, English language learners, and racially minoritized groups.

Survey Development

Drawing on literature findings and legislative priorities, four surveys were created for students, parents/caregivers, school staff, and administrators. Survey items were refined through cognitive interviews with students and feedback from parents and staff to ensure clarity, inclusivity, and developmental appropriateness. Final instruments assessed communication, preparedness, implementation quality, inclusivity, emotional impact, and perceived effectiveness.

Survey Implementation and Data Collection

During the first year (January–June 2025), surveys were administered across 59 schools in six districts, generating responses from 7,597 students, 1,054 staff, and 696 parents/caregivers. A school context survey, completed by administrators, provided additional detail on planning teams, communication timelines, training approaches, and accommodations.

Key Findings

- **Preparation & Training.** Most stakeholders reported receiving training, but coverage was uneven across grade levels and student groups. Students and staff requested more scenario-based guidance (e.g., drills during lunch or while in hallways).
- **Communication.** Families and students often received inconsistent or inadequate notification. Parents/caregivers requested clearer, trauma-informed communication before and after drills.

- **Implementation Quality.** While most students could follow drill steps, one in five reported mistakes. Middle school, Black, and special education students were more likely to note problems. Staff expressed concerns about student seriousness and classroom engagement.
- **Accommodations.** Nearly half of schools provided modifications for students with disabilities, but only one in five reported supports for English language learners. Student feedback confirmed that accessibility challenges remain.
- **Effectiveness.** Students, parents/caregivers, and staff broadly endorsed drills as preparing them for emergencies, though questions about real-world scenarios persisted.
- **Psychological Impact.** Most participants did not report distress, but a meaningful minority—particularly female, Black, English language learner, and special education students—experienced increased fear or worry. Staff and parents/caregivers also expressed concern about potential long-term effects.
- **Equity Gaps.** Subgroup differences across preparedness and emotional impact suggest benefits are not evenly distributed.

Implications and Recommendations

Findings demonstrate that Maryland is largely aligned with state guidelines but reveal variability, inconsistency, and inequities in how drills are implemented and experienced. Recommendations include:

- Expanding multidisciplinary planning teams.
- Enhancing scenario-based and role-specific training.
- Strengthening trauma-informed communication practices.
- Ensuring equity-focused accommodations for vulnerable groups.
- Promoting student engagement strategies that build buy-in without distress.
- Establishing systematic feedback loops for continuous improvement.

Next Steps

For Year 2, the project team will:

- Use study findings to provide recommendations for updating the MCSS Best Practice Guidelines.
- Develop stakeholder resources (plain-language, trauma-informed, accessible).
- Partner with the MCSS Student Advocates for School Safety (SASS) to co-create student-centered materials.

- Update the literature review with emerging evidence.
- Pursue advanced analyses, including multilevel modeling, to link school-level factors with stakeholder experiences.

Conclusion

This technical report integrates legislative context, literature synthesis, survey development, statewide implementation, and mixed methods analysis to provide a comprehensive picture of lockdown drill practices in Maryland schools. The findings affirm the value of drills for preparedness while underscoring the need for greater equity, consistency, and emotional safety. By acting on these insights, Maryland is positioned to set a national standard for balancing school safety with student well-being.

Introduction

In accordance with House Bill 416 (Chapter 182, 2024), the Maryland Center for School Safety (MCSS), in partnership with the National Center for School Mental Health (NCSMH) at the University of Maryland School of Medicine, initiated a statewide study to examine the effectiveness and psychological impact of active shooter safety drills in Maryland's public schools. As required by § 7-1502(g)(22) of the Education Article, the MCSS was tasked with collaborating with a research institution to conduct a study informed by data collected from local school systems. The bill also mandates the identification of best practices for active shooter drills and emphasizes trauma-informed and developmentally appropriate implementation.

This technical report documents the development of a suite of surveys—designed for students, caregivers, school staff, and school administrators—to support the study and data collection components outlined in the law. These surveys aim to capture feedback on drill experiences, perceptions of preparedness and safety, emotional responses, and the inclusivity and accessibility of implementation practices. They are used to meet the legislative requirement for systematic feedback from school communities and to inform recommendations for statewide best practices.

An annual literature review was also required as a standalone activity under the legislation; however, its findings were instrumental in shaping survey content. The review synthesized current evidence and best practices from peer-reviewed literature, policy guidance, and practitioner reports. It also incorporated trauma-informed and culturally responsive frameworks to guide the development of tools that are inclusive, contextually relevant, and sensitive to the varied experiences of Maryland's diverse student population.

Together, the literature review and resulting survey responses form the foundation of a comprehensive data-driven approach to studying and improving school active shooter drill procedures across the state. This technical report presents a summary of the literature review and how it informed survey development, outlines the survey development process, and describes methods for survey implementation during the current year. The report also details results from the first year of survey implementation and recommended changes for drill procedures in Maryland schools.

NOTE: This technical report may include terminology you are not familiar with. A list of definitions is included in Appendix A.

Literature Review

To fulfill the legislative requirements outlined in House Bill 416 (Chapter 182, 2024), the MCSS, in collaboration with the NCSMH, conducted a comprehensive literature review examining the effectiveness and psychological impact of active shooter safety drills in K–12 public schools. Although the literature review was a separate deliverable, its findings were foundational to the design and content of the survey instruments described in this report.

Search Strategy and Inclusion Criteria

The review focused primarily on empirical and theoretical literature published between 2014 and the present, with a few seminal works included in areas where research was limited—particularly in evaluating drill effectiveness. Studies were identified using a broad range of search terms to account for inconsistencies in terminology across the field. These included combinations of terms such as "lockdown," "school safety," "emergency preparedness," "active shooter," "drill," and "K-12," along with equity-related terms like "cultural considerations," "English language learner," "racially minoritized," and "trauma." The search was conducted using major academic databases, followed by an ancestral search of reference lists and consultation with experts in the field. Additionally, guidance documents from the National Association of School Psychologists (NASP) and the National Association of School Resource Officers (NASRO) were reviewed to supplement peer-reviewed findings with best practice recommendations.

Theoretical Framing

The literature review was grounded in two theoretical frameworks: (1) trauma-informed care, and (2) culturally responsive, anti-racist, and equitable (CARE) practices. Trauma-informed care emphasizes creating environments that promote emotional and physical safety and minimize re-traumatization, especially important in the context of drills that simulate or rehearse crisis events. Culturally responsive, anti-racist, and equitable practices draw attention to how students' intersecting identities—such as race, disability, or language status—may shape their experience of lockdown drills. These frameworks helped guide the interpretation of the literature and informed the design of survey items that could sensitively assess both procedural fidelity and differential impacts across student populations.

Key Findings

Findings from the review identified several core themes. First, there is significant variability in how lockdown and active shooter drills are defined and implemented across schools, which complicates both practice and research. Second, the evidence on drill effectiveness—particularly in real emergency situations—is sparse and mixed. While some studies report improvements in preparedness and procedural knowledge, others highlight inconsistent adherence to protocols and question whether drills translate into real-world safety gains.

Third, and critically, the literature raises concerns about the potential psychological harm of poorly designed drills. Research shows that drills involving realistic simulations, loud noises, or unannounced execution can increase fear, anxiety, and distress among students and staff. These effects appear more pronounced among younger students, students with prior trauma, and racially minoritized students—particularly in contexts where law enforcement presence is involved. Schools are encouraged to avoid unnecessarily distressing elements and instead adopt trauma-informed, developmentally appropriate practices.

Finally, the review emphasized the need for inclusive planning and implementation. This includes adapting drills to accommodate students with disabilities and English language learners and ensuring that drill procedures are clearly communicated in accessible formats to all students and families.

For a complete summary of the literature review findings, please see the full report titled Effectiveness and Psychological Impact of Active Assailant Lockdown Drills in Maryland Schools: 2024 Literature Review.

Discussion: Use in Survey Design

The findings from the literature review directly informed the structure and content of the four survey instruments developed for students, caregivers, school staff, and school administrators. For example, literature emphasizing the need for clear communication and advance notice shaped survey items about how and when students, staff, and parents were informed about the drill. Research highlighting mixed evidence on preparedness and procedural knowledge informed questions assessing whether participants knew what to do during the drill and felt equipped to respond in a real emergency. The documented psychological impact of drills—particularly among younger students and those with prior trauma—led to the inclusion of items about emotional responses, such as feeling scared, anxious, or safer as a result of the drill. Concerns about equity and accessibility informed items assessing whether students with disabilities and English language learners were able to participate safely and whether schools made appropriate accommodations. Finally, the trauma-informed and CARE frameworks elevated the importance of open-ended items that invite stakeholders to share specific concerns, suggestions, or observations not captured through scaled items. In sum, the literature review was not only a legislative deliverable but a critical blueprint for designing evaluation tools that are evidence-informed, developmentally appropriate, and culturally responsive.

Survey Development

Survey development for Maryland Education Code Ann., § 7-1502 (g)(22) and (g)(23) was informed by a literature review on best practices and existing surveys related to lockdown drills in K-12 public schools. The goal was to create and refine surveys for students, parents, and school staff, along with a school context survey for one administrator, to assess experiences with active assailant lockdown drills across multiple domains. The development process prioritized clarity, relevance, and inclusivity. Survey items were initially generated based on the legislative intent and key themes from the literature, including preparedness, instruction clarity, emotional impact, and accessibility.

To refine the student survey and ensure its usability, the MCSS and NCSMH research team conducted cognitive interviews with a group of students. These interviews aimed to address the following research questions:

1. Are the survey items clear and comprehensible to students across different grade levels?
2. Do the survey items adequately capture key aspects of lockdown drills, including preparedness, emotional impact, and accessibility?
3. Are there gaps in the survey where additional questions are needed to address student experiences comprehensively?
4. Are the response formats (e.g., Likert scales, Yes/No items) appropriate and user-friendly for students?

This study highlights the importance of centering student perspectives in evaluating lockdown drills, ensuring that the final student survey is a reliable and meaningful tool for understanding and improving these critical safety practices.

Method

Two cognitive interview sessions were conducted with five students to assess clarity, relevance, and inclusivity of survey items. Cognitive interviews are a qualitative method used to understand how participants interpret survey questions, identify potential ambiguities, and evaluate the survey's overall design and usability. This approach ensures that survey items are comprehensive, relevant, and capable of capturing the intended constructs. Additionally, student survey items were sent out to volunteer parents and school staff members to examine their perspectives regarding the survey.

Participants

Participants for the cognitive interviews included five students from diverse grade levels and school settings: three in the 11th grade, one in the 9th grade, and one in the 8th grade. Participants were recruited through the MCSS's Advisory Board network. Adult participants included two parents and one school staff member recruited through the MCSS's advisory board network.

Measures

The student survey was designed to evaluate experiences with lockdown drills across several domains, including preparedness, emotional impact, and clarity of instructions. The survey included 23 items, inclusive of demographic variables, such as grade, race, and primary language. Example items from the survey include the following: “The lockdown drill made me feel more worried about my safety at school,” and “The lockdown drill helped me to understand what to do in an emergency.” Most items utilized a 6-point Likert scale (e.g., Strongly Disagree to Strongly Agree) to capture the extent of agreement with statements. Some items, particularly those assessing preparedness and clarity, included Yes/No response options. The parent survey was designed to evaluate parent perspectives on students’ experiences with lockdown drills as well as their own. Similarly, the school staff survey was designed to evaluate staff’s perspectives on students’ experiences with lockdown drills as well as their own.

Procedure

Cognitive interviews were conducted in a virtual setting and lasted between 30 and 45 minutes each. A slide deck was used to guide discussions and present survey items systematically. The interviews began with a researcher introducing the team and the purpose of the interview, ensuring that participants understood the goals of the study and their role in providing feedback on the survey items. Afterward, participants were engaged in an introductory conversation and were asked several questions to encourage reflection and establish context for the discussion: What are lockdown drills? Has your school had a lockdown drill this semester? If so, what was that experience like? What instructions did your school give you about the drill. These questions helped the student orient themselves to the conversations.

Afterward, the students were asked to complete the full student survey via Qualtrics. After completing the survey, participants were asked to reflect on the clarity, relevance, and interpretability of select questions on the survey. Specific probing questions were used to explore potential sources of confusion, assess whether the questions adequately captured participants’ experiences, and solicit suggestions for improvement. Such questions include “Was it clear to you what this question was asking? If not, what made it unclear?” and “In your own words, what is this question asking students?” The facilitator also asked participants to propose additional questions they felt would improve the survey’s comprehensiveness or inclusivity. The semi-structured nature of the interviews allowed for flexibility to delve into participant’s unique feedback.

Parent and school staff survey items were provided to volunteers via Qualtrics. Volunteers were asked three questions: “Are any items unclear or seem like they may be confusing to students? If so, please explain,” “Are there any questions we should add to the student survey that would help us to understand students’ experiences in lockdown drills?” and “Are there any other changes you would like to make to any of the current questions?”

Data Analysis

Transcripts from cognitive interviews were analyzed thematically to identify patterns in participants' feedback. Codes were developed to categorize comments related to item clarity, relevance of content, and recommendations for additional questions or changes. Thematic analysis allowed for a detailed understanding of how students interpreted the survey and highlighted areas for refinement. Parent and school staff feedback were collated and summarized.

Results

The student cognitive interviews and adult volunteer feedback provided valuable insights into item clarity, survey coverage, and response formats. Four key themes emerged, directly addressing the research questions (see Table 1): presentation and clarity of survey items, adequacy of items in capturing key aspects of drills, response format appropriateness, and student emotional responses. These themes are described below.

Table 1. Themes from Student Interviews

Theme	Key Findings	Illustrative Quote
Presentation and Clarity	Ambiguities in items like "There were mistakes or problems during the drill"; need for a disclaimer.	*"…if there was…like a general disclaimer in the beginning, saying nothing will be held against you or like held against your teachers for being honest…"*
Adequacy of Items	Suggestions for items addressing situational preparedness, accessibility, and teacher behaviors.	*"I agree that I know what to do during the lockdown…but…what if I'm in the hallway and a lockdown is called? Where do I go?"*
Response Format	Need for alignment between anchors and question content; preference for familiar Likert	*"…it should be specific for each question. It just makes it so much more easier to comprehend it when you use the same language as the language that's asked in the question."*
Emotional Responses	Items on emotional responses were appreciated for addressing the psychological impact of drills.	*"These questions really went in depth and they also like went into how the person feels emotionally…I feel like these questions were really great and really hit a good point."*

Presentation and Clarity of Survey Items

Participants provided valuable feedback on the presentation and clarity of survey items, highlighting areas where clearer communication and additional context could improve the survey experience. One participant suggested the inclusion of a disclaimer to enhance transparency and foster trust: "…if there was…like a general disclaimer in the beginning, saying nothing will be held against you or like held against your teachers for being honest…" This was in response to concerns over question 13—*I took the drill seriously*. Another student explained, "I don't think many students will answer question 13 [truthfully] because that's kind of like telling on themselves…maybe if it was worded in a way like 'My school demonstrates drills as something that's serious or something like that…kind of making it a group think like generally do people think this is a serious thing." A parent volunteer shared the same sentiment: "[This question] will not be answered honestly." Additionally, students frequently highlighted instances where items were ambiguous or lacked specificity, demonstrating the importance of ensuring survey questions are comprehensible across grade levels. For example, the item "There were mistakes or problems during the drill" was flagged as unclear. One participant noted,

> *I thought that number three—there were mistakes or problems during the drill is really broad. Like what would some examples be of mistakes or problems…I guess did everyone follow the drill smoothly? Were there any complications, such as people being lost or not following directions?*

Similarly, another student suggested, "A common mistake would be just a noise level, like were students quiet? I think getting lost is also one, but I think volume level is a major one." These observations reveal that students struggled to interpret what was being asked without examples or clarification. Similarly, for the item, *The lockdown drill made me feel upset*, a school staff member noted the need to define upsetting and perhaps use other adjectives, such as anxious, fearful, or overwhelmed "just to identify valid feelings students may have."

Adequacy of Items in Capturing Key Aspects of Drill

Participants reflected on whether the survey sufficiently captured critical aspects of lockdown drills, such as preparedness. While students acknowledged that the survey addressed general safety, they pointed out areas where items could be more comprehensive. Regarding preparedness, one student discussed a recent drill and their curiosity over its efficacy in different scenarios:

> *[The drill] was pretty successful for me, personally, but I also think it was a little vague in terms of what would happen if we weren't in this exact situation. So like, if our drill was during fourth period, it was like what would happen if that was during lunch or in between classes.*

Similarly, as it relates to question 10—*I know what to do during an actual lockdown to keep myself safe*, a student said, "I think I said somewhat disagree for this one because…sometimes

you, you're in different situations and you might not know what to do in a lockdown to keep yourself safe." Another student explained their response to the same question:

> *I agree that I know what to do during the lockdown to keep myself safe because the instructions are clear and I understand..but the reason I didn't say strongly was just because of that scenario that we keep raising—that what if I'm in the hallway and a lockdown is called? Where do I go?*

Drill preparation also came up as a feature of training. One student explained, "…we've been hearing the same [drill] steps since like elementary school, so it's kind of hard to forget. But at the same time, they don't really refresh you on that," signaling the need for items to better understand what preparation looks like at their current school. Other students discussed accessibility challenges. For example, one student noted, "I have a disability and I use my wheelchair sometimes and sometimes getting in the corner for the lockdown is hard…that should definitely be recognized during the drill."

Additionally, participants identified areas where additional survey items could provide more comprehensive insights. A recurring theme was the role of staff during lockdown drills:

> *I definitely think that we can add a question about how we believe the staff operated during the drill. I think that's really important because a lot of our students look to our teachers for guidance and for support…and, to be honest, if you have a teacher whose freaking out, your students are going to freak out, you know, but if you have a teacher whose calm, cool, and collected…the classroom will likely stay calm, cool, and collected.*

Finally, students suggested the need for opportunities to provide additional feedback. One student noted, "…maybe like a comment section at the end…I think if someone had a very strong experience about the drill, they should have a space to write a sentence about any sort of strong feeling." Overall, these reflections suggest that, while the survey captures key constructs, it may benefit from additional items exploring situational preparedness, accessibility, and teacher behaviors.

Response Format Appropriateness

The response formats were generally well-received, but participants suggested refinements to improve usability and alignment with the items. For example, one student noted the need to match the item anchors to individual questions: "…it should be specific for each question. It just makes it so much more easier to comprehend it when you use the same language as the language that's asked in the question." On the other hand, another student noted, "I think strongly disagree and agree is more clear, just since we're already accustomed to that type of structure, it would take more adjusting to change it."

Emotional Responses to Drills

Participants shared diverse emotional reactions to lockdown drills, reflecting both their psychological impact and the necessity of such practices. One student noted:

> *I specifically loved the questions...that were talking about [emotional responses to the drill] because they really touched on how these drills make students feel emotionally and mentally…and it's a big problem. The mental strain that these drills put on students, and when it asks that the drill made me feel more worried, its really a question that required me to look within myself and give an honest answer.*

Similarly, another student described: "These questions really went in depth and they also like went into how the person feels emotionally. I feel like these questions were really great and really hit a good point." These reflections suggest that items addressing emotional responses are critical for capturing the psychological impact of lockdown drills, a core component of the survey.

Discussion & Survey Refinement

Findings from cognitive interviews and feedback sessions with students, staff, and parents highlighted critical aspects of the lockdown drill survey's effectiveness. Specifically, four themes emerged: presentation and clarity of survey items, adequacy of items in capturing key aspects of drills, response format appropriateness, and students' emotional responses. These insights provide a foundation for refining survey items to enhance clarity, comprehensiveness, and response accuracy.

Participants raised concerns about item phrasing and transparency, particularly regarding how students perceive and interpret certain questions. Ambiguities in wording and lack of specificity in some survey items led to difficulties in response accuracy. For instance, questions such as "I took the drill seriously" were flagged as potentially leading to dishonest responses due to students' reluctance to admit noncompliance. Suggestions included shifting such items toward a collective perspective, e.g., framing the question around school-wide perceptions of drill seriousness. Additionally, items such as "There were mistakes or problems during the drill" were deemed overly broad, with participants recommending the inclusion of specific examples (e.g., noise level, movement issues) to improve clarity. Emotional response items also warranted refinement, with participants suggesting alternative descriptors such as "anxious" or "fearful" instead of the general term "upset."

Participants questioned whether the survey fully captured essential aspects of lockdown drills, particularly in terms of preparedness and situational variability. Many students noted that drills often follow a predictable pattern, raising concerns about their applicability to real-life scenarios. For example, students questioned how well the drill prepared them for situations occurring outside of structured classroom time (e.g., during lunch or passing periods). Additionally, students with disabilities highlighted challenges in adhering to lockdown protocols, underscoring

the need for survey items that assess accessibility. Another key insight was the role of staff in guiding students through drills; participants recommended including items that evaluate teacher behavior and its impact on student responses. Lastly, students advocated for an open-ended feedback section to allow for nuanced reflections on their experiences.

While the overall response format was generally well-received, participants suggested refinements to enhance clarity and alignment with item content. Some noted that response anchors should be tailored to specific items rather than applying a uniform scale throughout the survey. Others advocated for maintaining a familiar structure (e.g., strongly disagree to strongly agree) to facilitate comprehension. These findings highlight the importance of consistency in response formatting while ensuring that scales remain relevant to each question's intent.

Participants emphasized the importance of survey items addressing the psychological impact of lockdown drills. Students found these items particularly meaningful, as they provided a space to reflect on their emotional reactions. Many appreciated the depth of these questions and their ability to capture nuanced feelings such as anxiety and mental strain. These insights affirm the value of retaining and potentially expanding emotional response items to ensure a comprehensive assessment of students' psychological well-being in relation to lockdown drills.

Overall, findings suggest that while the survey effectively measures key aspects of lockdown drill experiences, targeted refinements can enhance its clarity, comprehensiveness, and usability. As a result, several refinements were made to the student survey prior to the initial distribution in January 2025:

- A disclaimer was added at the beginning of the survey to reassure participants about anonymity and honesty in responses.
- Researchers revised ambiguous items to avoid leading responses and promote more accurate self-reporting.
- Examples were added to broad items (e.g., defining mistakes or problems).
- Researchers adjusted emotional response items to include more previse descriptors.
- Items were added to assess students' perceptions of staff guidance and response during lockdown drills.
- Items were added to address accessibility challenges for students with disabilities.
- An open-ended comment section was added for participants to provide additional reflections.

By making these refinements, the lockdown drill survey will better capture students', staff's, and parents' experiences by improving clarity, inclusiveness, and response accuracy. Enhancing question transparency, refining response formats, and accessibility considerations will ensure

that the survey reflects the diverse realities of lockdown drills. Additionally, expanding emotional response items and allowing open-ended feedback will provide deeper insights into the psychological impact of these drills. These improvements will ultimately strengthen the survey's validity, making it a more effective tool for schools to assess and improve lockdown procedures while prioritizing student safety, well-being, and preparedness.

2024-2025 Survey Implementation

Following the development and refinement of the lockdown drill surveys, the next phase of this project focused on implementing the instruments across Maryland public schools. Implementation efforts were designed to align with the goals of Maryland Education Code Ann., § 7-1502 (g)(22) and (g)(23) by capturing timely, school-specific feedback from students, parents/caregivers, school staff, and administrators following an active assailant lockdown drill. This section outlines how the surveys were administered and preliminary findings from the first semester of data collection.

Method

Participants: Fifty-nine schools from six Maryland school districts participated in the school context survey. Individual participants included three key stakeholder groups: 7,597 students in grades 6-12, 1,054 school staff and administrators serving grades K-12, and 696 parents/caregivers of students in grades K-12. See Appendix B for more information on participant characteristics.

Measures: Three stakeholder-specific surveys were developed and administered to assess experiences with active assailant lockdown drills across students, parents/caregivers, and school staff. Each survey included a combination of scaled (1-6 Likert), binary (i.e., yes/no) or categorical (e.g., yes/no/other), and open-ended items aligned with legislative priorities. See Appendix C for a full list of survey items.

The student survey included 23 items, excluding demographics. Items were grouped into four main domains: (1) preparation and communication (e.g., Did your school tell you ahead of time that a lockdown drill was going to happen?), (2) drill execution and clarity (e.g., I was able to follow the steps of the lockdown drill easily), (3) emotional and psychological impact (e.g., The lockdown drill made me feel upset or scared), and (4) perceived effectiveness and safety (e.g., The lockdown drill helped me feel ready to handle a real emergency).

The parent/caregiver survey contained 27 items, organized into four main areas: (1) school communication (e.g., My child's school informed about the lockdown drill before it happened), (2) perceptions of the drill (e.g., I am comfortable with my child participating in lockdown drills), (3) observed impact on children (e.g., I noticed negative changes in my child's behavior after the lockdown drill), and (4) confidence and concern (e.g., I worry about the long-term emotional impact of lockdown drills on my child).

The school staff survey consisted of 23 items, covering five key constructs: (1) preparation and training (e.g., I received enough advance notice about the drill to prepare students), (2) observations during the drill (e.g., During the drill, most of my students appeared calm), (3) perceptions of effectiveness (e.g., the lockdown drill helped me feel more prepared for a real emergency), (4) emotional support readiness (e.g., I felt prepared to support students' emotional

needs during the drill), and (5) concerns and confidence (e.g., I worry about the long-term emotional impact of lockdown drills on students).

A fourth survey, called the school context survey, captured factual and procedural information about lockdown drill implementation. Only one response was submitted per school, typically completed by a school administrator. This survey included 37 items within given key domains: (1) school demographics and background (e.g., grade levels served, urbanicity, Title 1 status), (2) drill planning and execution (e.g., Who is involved in planning lockdown drills at your school), (3) communication timelines (e.g., how long before the drill were parents/caregivers notified), (4) training and preparation (e.g., How were students trained or prepared for the drill), and (5) accommodations (e.g., Was the drill modified in any way to accommodate students with disabilities).

Each survey also included a final open-ended comment box, allowing all stakeholders to share any additional thoughts, concerns, or suggestions that were not captured by the structured survey items.

Procedure: Data collection took place from January-June 2025. Survey implementation was coordinated by the MCSS in collaboration with the NCSMH at the University of Maryland School of Medicine. All four surveys were administered online using Qualtrics platform. Each survey was designed to be completed shortly after a school conducted a lockdown drill to ensure feedback reflected participants' most recent experiences. Thus, response windows were flexible and determined locally based on the timing of drills and system-wide coordination preferences.

Recruitment and communication efforts were conducted through a multi-channel outreach strategy. Surveys were advertised via the MCSS website, the Maryland State Superintendent's weekly newsletter, and through direct communication with school safety coordinators and security directors in each of Maryland's 24 local school systems. These stakeholders were responsible for disseminating survey links at the school district level. Each survey was accessible through a unique public link, and participation was both voluntary and anonymous.

Schools were encouraged to ensure broad participation across stakeholder groups and were instructed to have only one administrator per school complete the school context survey. No personally identifying information was collected from respondents; however, all survey data were linked to the school's name to allow for cross-group analysis.

Data Analysis Plan

Analyses were conducted to examine perceptions of lockdown drill communication, implementation quality, preparedness, emotional and behavioral responses, and overall contextual factors. Quantitative and qualitative data were analyzed simultaneously, using a domain-based mixed methods approach.

Quantitative analysis involved descriptive statistics conducted using SPSS Version 29. For multiple-choice and categorical items, frequencies and percentages were calculated. For Likert-scale items, means and standard deviations were reported to capture central tendencies and variability in responses. In addition, response breakdowns by level of agreement (e.g., the percentage of respondents who agreed or strongly agreed with each item) were used to highlight patterns of endorsement.

Beyond descriptive statistics, subgroup comparisons were conducted within each stakeholder group (parent, school staff, students) to examine whether perceptions of lockdown drills differed by demographic characteristics. In cases where sample sizes were too small to support stable estimates, demographic variables were collapsed into broader categories (e.g., dichotomizing gender, combining smaller racial/ethnic groups). For binary (yes/no) outcomes, chi-square tests of independence were used to compare responses by available demographic variables across stakeholders. For Likert-scale outcomes, independent-samples t-tests were used for demographic comparisons with two groups (e.g., dichotomized gender), and one-way ANOVAs were used for comparisons with more than two groups (e.g., race). When ANOVAs were significant, post hoc comparisons (Bonferroni) were conducted to identify which groups differed.

Importantly, some administrators indicated that their schools had conducted a training rather than a lockdown drill, and some stakeholders completed surveys even though no drill had occurred during the reporting period. To preserve the accuracy of drill-specific findings, responses to items that asked directly about a current lockdown drill were excluded from analysis if the respondent indicated that no drill took place or if it was clear that the item was not applicable (e.g., emotional reactions to a drill that never occurred). These exclusions were handled on an item-by-item basis to retain relevant data while ensuring the validity of drill-specific analyses.

Qualitative data from open-ended survey responses were pre-structured based on the key constructs measured in each survey, which reflected areas of interest for each stakeholder group (e.g., communication, preparedness, emotional response). These responses were used to elaborate upon, complicate, or contextualize the patterns emerging from closed-ended items. Open-ended responses were sorted by stakeholder group and survey domain, and then inductively coded within those categories to identify common themes, illustrative examples, and points of divergence. This approach enabled us to maintain alignment with the original survey design while allowing emergent themes to enhance understanding of the fixed-response data. Responses that clearly referred to trainings rather than actual drills were excluded from drill-specific domains to ensure alignment across data sources.

Results

The following section presents findings from the parent, staff, student, and school context surveys to describe perceptions and experiences related to lockdown drills. Results are organized by respondent type to highlight distinct perspectives across stakeholder groups.

School Context Survey

Schools were asked to fill out one school context survey following a lockdown drill occurrence. Findings are organized into four domains: general background on lockdown drills, school communication and training, drill implementation and accommodations.

General Background on Lockdown Drills

Most schools conducted lockdown drills once (50%) or twice (38%) per year, with 11% conducting them 3+ times. Reporters described involving several professionals on the planning team. School administrators (98%), teachers (48%), and school resource officers (39%) were most common, while school mental health professionals (23%), local law enforcement (7%), and community members (5%) were less commonly involved.

When asked about stakeholder feedback toward lockdown drills generally, over half of the respondents (55%) reported mostly positive feedback from staff, students, and/or parents/caregivers. 25% had not received any feedback.

School Communication & Training

School communication for the current lockdown drill varied across stakeholder groups. Parents/caregivers were most commonly notified either a week or more in advance (46%) or on the day of the drill (22%). Similarly, school staff were most commonly notified a week or more in advance (71%). Contrarily, students were most commonly notified the day of the drill (30%) or within two to five days prior (25%).

With regard to training, most students were prepared through in-person live sessions (70%), though many schools also used methods such as online training modules (20%). Open-ended responses also indicate that schools often used teacher-led discussions in the classroom:

> *Homeroom teachers reviewed with the students the purpose of the drill and what to do once the drill was announce.*
>
> *Teachers spoke with students to practice ahead of time.*
>
> *Prior to the lockdown drill (live), teachers used slides to review school lockdown procedures, actions, expectations, and take any questions*

Staff preparation mirrored this trend, with 80% receiving in-person training and about a third accessing online modules or handouts. Very few schools (2%) providing no training to school staff.

Lockdown Drill Implementation & Accommodations

On the day of the drill, most students and staff were notified through an in-person announcement (75%) and/or an email/text/school's notification system (59%). Most drills lasted between 5 to 15 minutes with an average length of 11.35 minutes.

Accommodations for students with disabilities were reported by 44% of schools. Modifications included early notifications, reduced sensory exposure, use of noise-canceling headphones, one-on-one support, and tailored communication strategies. Schools emphasized planning with special education staff and counselors to reduce anxiety and ensure safety. In contrast, only 20% of schools reported accommodations for English language learners (ELL). Supports included bilingual training materials, assistance from ELL teachers or peers, and pre-drill explanations in students' native languages.

Student Survey

Students were asked to report on their experiences with and perceptions of the lockdown drill conducted at their school. Findings are organized into five domains: pre-drill preparation and communication, drill experience, drill inclusivity, drill effectiveness, and emotional impact and sense of safety.

Pre-Lockdown Drill Preparation & Communication

Most students reported being informed about the lockdown drill in advance (78%), and a large majority (82%) had recently received instruction or a review on what to do during a drill. Among those who had received training, 88% said it helped them feel prepared. For students who had not recently received instruction, 37% said they were last taught earlier in the school year, while 12% were last taught during the previous school year. Notably, 35% did not remember when they were last taught, and 9% said their school had never reviewed the steps with them.

Subgroup analyses indicated several significant differences in preparation and communication. High school students (88%) reported receiving more advanced notice of the lockdown drill than middle school students (74%). High school students (86%) also were more likely to report recently reviewing lockdown drill procedures in the classroom compared to middle school students (80%). Additionally, ELL (84%) were more likely to report recently reviewing lockdown drill procedures as compared to non-ELL students (80%).

Lockdown Drill Experience

Students generally agreed that their teachers helped them follow directions ($M = 4.94$) and to stay calm ($M = 4.56$) during the lockdown. While 90% of students felt they were able to follow the steps of the drill easily ($M = 5.14$), one in five students reported that there were mistakes or problems during implementation. Open-ended responses indicated common issues, such as students talking and moving around or not following instructions: "*Kids were talking and not following directions well; my teacher was having trouble keeping them under control*." Indeed, only half of respondents indicated that students take lockdown drills seriously in their school.

Several subgroup differences emerged in this domain. High school students were more likely to report teacher support in following directions ($M = 5.16$ vs. 4.92, $p < .001$) and staying calm ($M = 5.00$ vs 4.48, $p < .001$) compared to middle school students. Similarly, middle school students

(20%) were twice as likely as high school students (9%) to report problems during the drill. Black (21%) and other racially minoritized students (20%) were more likely to report mistakes during the drill than Asian students (13%). Non-ELL students (19%) were more likely than ELL (14%) to report mistakes. Similarly, students receiving special education (SPED) services were more likely to report mistakes during lockdown drills. About one in four students receiving SPED services reported mistakes, compared to about one in six non-SPED students. Finally, several subgroup differences emerged for perceptions of seriousness. Middle school (M = 3.43 vs. 3.88), female (M = 3.48 vs. 3.61), and non-ELL students (M = 3.48 vs. 3.62), were less likely to perceive their peers as taking the lockdown drill seriously compared to high school and male students, and ELL.

Lockdown Drill Effectiveness

Students generally agreed that the drill increased their preparedness. About 73% of students agreed to some extent that the drill helped them feel ready for a real emergency (M = 4.20), and even more (M = 4.85) reported that they knew what to do to stay safe. The strongest endorsement was for understanding the purpose of lockdown drills (M = 5.13) with over 90% of students agreeing to some extent for this item. Open-ended responses indicated students have questions around drill implementation, including the following:

> *Won't the attacker know where we are going to hide anyways because they went to school before?*
>
> *Why are we doing these drills if the shooter is in the room and knows the plan?*
>
> *When you are hiding in the classroom do you let anyone in if they are out knocking on the door or not.*

Subgroup analyses indicated that high school students consistently reported higher preparedness than middle school students, including greater readiness for a real emergency (M = 4.29 vs. 4.19), ease of following the lockdown drill steps (M = 5.30 vs. 5.12), and understanding of the purpose of lockdown drills (M = 5.26 vs. 5.13). Non-ELL students reported greater understanding of lockdown drills (M = 5.18 vs. 5.01) and higher ease of following the lockdown drill steps (M = 5.18 vs. 4.98) versus ELL. Students receiving special education services were less likely to say they could easily follow the steps of the drill (M = 4.93) compared to non-SPED students (M = 5.19). Similarly, they were less likely to understand the purpose of the drill (M = 4.82) compared to non-SPED students (M = 5.17). Male students rated their ability to follow drill steps lower than female students (M = 5.09 vs. 5.18). They also reported lower understanding of the purpose of lockdown drills compared to female students (M = 5.04 vs. 5.26). Finally, White and Black students reported greater understanding than Asian students ($F(3, 5239) = 11.41$, $p < .001$, $\eta^2 = .006$).

Emotional Impact & Sense of Safety

Most students did not report being upset or scared by the lockdown drill. The mean score for this item was low ($M = 2.15$), with 18% agreeing to some extent. Thirty percent of students agreed to some extent that the drill made them more worried about their safety at school. Conversely, over half of students (68%) agreed that they felt safer at school because of these drills ($M = 3.95$).

Subgroup differences were notable in this domain. Female students were more likely than male students to report feeling upset or scared ($M = 2.31$ vs. 2.02). Similarly, ELL were more likely to report feeling upset or scared as compared to their non-ELL peers ($M = 2.32$ vs. 2.15). Black students were more likely than Asian and White students to report feeling upset or scared ($F(3, 5288) = 13.45$, $p < .001$, $\eta^2 = .008$). Black students reported more worry than Asian and White students, while Asian students reported less worry than Other racially minoritized students ($F(3, 5280) = 14.75$, $p < .001$, $\eta^2 = .008$). Finally, students in SPED were more likely to report that the drill made them feel upset or scared ($M = 2.55$) compared to non-SPED students ($M = 2.13$). They also reported slightly higher worry about their safety at school as a result of the drill ($M = 1.59$) compared to non-SPED students ($M = 2.72$).

Student Results Summary

Preparation & Communication: Most students reported receiving advance notice (78%) and recent instruction (82%) about lockdown drills. High school students and ELL Learners were more likely than their peers to report being informed or recently trained.

Drill Experience: Students generally felt supported by teachers and able to follow procedures, though one in five noted mistakes (e.g., peers talking or not following directions). High school students reported stronger teacher support, while middle school, Black, and other racially minoritized students, as well as students receiving special education services, were more likely to notice problems. Only half of students believed their peers took drills seriously, with middle school, female, and non-ELL students least likely to endorse seriousness.

Effectiveness: About three-quarters felt the drill helped them prepare, and over 90% understood the purpose of lockdown drills. High school students reported greater preparedness than middle school students. Non-ELL students reported higher ease and understanding compared to ELL. Students receiving SPED services and male students reported lower ease and understanding compared to their peers. White and Black students reported greater understanding than Asian students.

Emotional Impact & Safety: Most students did not report feeling upset or scared, though 18% did. Over two-thirds said drills made them feel safer, while 30% said drills increased their worry about safety. Female students, Black students, ELL, and students receiving SPED services reported higher distress and worry compared to their peers. Asian students were less likely to report worry compared to other groups.

Parent/Caregiver Survey

The parent/caregiver survey captured caregivers' experiences and perspectives regarding school lockdown drills, with the understanding that some parents responded on behalf of multiple children. As such, results are reported in terms of *reported cases* rather than unique individuals. Findings are organized into four domains: school communication, perceived drill quality and preparedness, general attitudes toward drills, and observed child emotional and behavioral responses. Selected qualitative responses are incorporated to provide additional context and illustrate key themes.

School Communication about the Lockdown Drill

Parents/caregivers reported varied experiences with school communication about the lockdown drill. In 64% of reported cases, schools informed families in advance of the drill, while in 66% of cases, schools communicated with families afterward. The quality of the lockdown drill communication also varied. On average, parents/caregivers moderately agreed that the school's communication about the drill was effective ($M = 4.09$) and that they received enough information beforehand to help reassure their child(ren) ($M = 3.92$). Qualitative comments frequently expressed a desire for more proactive and transparent communication to better prepare their child(ren):

> *There has been no communication at all regarding lock down drills, and as someone who was born and raised in Newtown, CT, and has personal connections with individuals who were at Sandy Hook School that day, we need some kind of heads up that these things are happening.*

Perceived Lockdown Drill Quality and Preparedness

Parents/caregivers largely endorsed the effectiveness of the lockdown drill ($M = 4.66$) and believed their child(ren) is better prepared for a real lockdown emergency due to the drill ($M = 4.51$). Additionally, in 78% of reported cases, parents/caregivers said the drill increased their confidence in the school's safety procedure. Finally, in 9% of cases, parents/caregivers believed their child(ren) seemed confused or did not fully understand the purpose of the lockdown drill. Open-ended comments reflected concerns on drill quality:

> *The students weren't asked to move from their seats or stay quiet, nobody tried the doors to see if they were locked, there was no actual attempt to carry out an effective lockdown. Again, in my daughter's words, "Now if there's an actual lockdown, we're all less safe because nobody actually knows how to do it properly, so a bunch of people are probably going to get shot." Carrying out an unserious exercise like this is worse than not doing lockdown drills at all.*

Subgroup analyses revealed that male parents/caregivers rated the drill less effective compared to female parents/caregivers (M = 4.30 vs. 4.74). They were also less likely to believe that it prepared their child for a real emergency (M = 4.21 vs. 4.58).

Child Emotional and Behavioral Reactions

Parents/caregivers believe their children largely managed the drills without notable distress. In 93% of reported cases, children did not seem upset over the lockdown drill. Similarly, in 96% of cases, parents/caregivers did not notice any negative changes in their child's behavior after the lockdown drill.

Other specific signs of stress were minimal: 5% of children experienced physical reactions (e.g., stomachaches) after the lockdown drill; 4% became clingier or showed signs of anxiety, and 4% expressed a desire to avoid going to school after the lockdown drill. Open-ended responses reflected a range of reactions. For example, one parent noted, "*Headache, negative mood, increased irritability, saying things like "the world is a terrible place and people are awful'.*" Similarly, another described the link between lack of communication and their child's reaction to the drill:

> *Bad mood/upset, wouldn't eat dinner. I didn't know anything about the drill until I got the email with this survey… I concluded that his attitude and really bad day may have been due to the drill. My son is very anxious and thinks about school shootings a lot. Unfortunately. I understand the need for the drills but I would have liked to have been prepared.*

Finally, parents/caregivers reported needing to reassure their child of their safety at school after the lockdown drill in 10% of cases.

Male parents/caregivers were more likely than female parents to report noticing negative behavioral changes in their child (7% vs. 2%) and clinginess or separation anxiety (9% vs. 3%) following the lockdown drill. White (18%) and Other racially minoritized parents/caregivers were more likely than Black parents (0%) to worry about the long-term emotional impact of lockdown drills on their child.

General Attitudes toward Lockdown Drills

Parents/caregivers expressed mixed feelings about the broader value and emotional impact of lockdown drills. They generally felt comfortable with their child participating (M = 4.96), and in 88% of reported cases, participants believe that lockdown drills help create a more prepared school environment. Open-ended responses also reflected this: "*Safety drills of all kinds are important for schools to engage in. These types of drills keep our kids, teachers and staff safe if they ever have an emergency.*" However, concerns were not absent. In 22% of reported cases, parents indicated that they worry about the long-term emotional effects of these drills on their children.

Parent/Caregiver Results Summary

School Communication: About two-thirds of parents reported that schools communicated both before (64%) and after (66%) the lockdown drill. On average, parents moderately agreed that communication was effective ($M = 4.09$) and sufficient to reassure their children ($M = 3.92$). Qualitative responses highlighted a need for more proactive, transparent communication to reduce confusion and anxiety.

Perceived Drill Quality & Preparedness: Most parents viewed the drills as effective ($M = 4.66$) and believed they prepared their child for a real emergency ($M = 4.51$). In 78% of cases, drills increased parents' confidence in school safety procedures, though 9% reported that their child seemed confused about the drill's purpose. Male parents rated drills as less effective and less preparatory than female parents. Open-ended comments noted concerns about drills being conducted too superficially to be meaningful.

Child Emotional & Behavioral Reactions: Parents generally reported little distress among children, with 93% not upset and 96% showing no behavioral changes after the drill. A small proportion showed stress reactions, including physical symptoms (5%), clinginess/anxiety (4%), or avoidance of school (4%). In 10% of cases, parents needed to reassure their children of their safety. Male parents were more likely than female parents to report negative changes (7% vs. 2%) and separation anxiety (9% vs. 3%). White (18%) and Other racially minoritized parents (20%) were more likely than Black parents (0%) to express concern about long-term emotional impacts.

General Attitudes: Most parents felt comfortable with their child participating in drills ($M = 4.96$), and 88% believed drills improve school preparedness. Still, 22% worried about potential long-term emotional effects. Racial differences were evident: White and Other racially minoritized parents were more likely to report such worry, while Black parents did not.

School Staff Survey

School staff were asked to report on their experiences with and perceptions of the lockdown drill conducted at their school. Findings are organized into five domains: preparation and communication, observations of students during the drill, perceived effectiveness, concerns and training needs, and overall school safety.

Preparation and Communication about the Drill

School staff largely felt they were given adequate notice about the drill. Over 96% of school staff agreed that they received enough advance notice to prepare students ($M = 5.52$), and 96% felt similarly about having enough time to review emergency procedures ($M = 5.52$). It is important to note that, despite this, some staff experienced stress due to inadequate notice: "*I would love advance notice about the lockdown drill due to past trauma as a child. I know this isn't always possible, however it would be helpful to prepare not only myself but my students as well*." Nearly all respondents (96%) reported that the training they received was adequate to prepare for their

role in the drill, with only 1% indicating they had not received training. However, despite this high percent, open-ended responses indicated questions around scenarios that may happen:

> *We need to address what would happen to students or give them options if they are in the hallway during a lockdown drill. I almost feel like they would be better running for the nearest door and getting outside and not being a sitting duck in the bathroom with their feet up.*

Subgroup analyses revealed some differences. Male school staff expressed greater confidence than female staff in their ability to follow lockdown drill directions in a real emergency (M = 5.52 vs. 5.35). Classroom teachers/aides, however, reported lower confidence than non-classroom staff (M = 5.35 vs. 5.51) and slightly less advanced notice to review emergency procedures (M = 5.47 vs. 5.61). Racially minoritized staff were more likely than White staff to endorse the adequacy of training received in preparing them for their role in the lockdown drill (M = 8.63 vs. 6.26).

Observations of Students During the Lockdown Drill

Approximately 92% of staff agreed that students appeared calm (M = 5.41), and 91% agreed that students followed directions (M = 5.38). Few staff reported signs of distress—only 11% agreed that students showed visible anxiety (M = 1.96), and 12% indicated that students expressed fear or discomfort afterward (M = 1.91).

Despite school staff indicating that students largely remained calm and followed directions, open-ended responses indicated concerns with student behavior:

> *Students are not taking the drills seriously and are not making them effective. What can we do to help students be serious, even if it is a drill?*

> *Some students refuse to put phones away during the drill. I need to know what my next steps are during drills: Should I continue to model by keeping my phone away, sitting quietly, and not engaging, OR should I intervene during these times to remind students to keep phones away? What do I know when students continue to disregard directions about putting phones away after being given additional instructions to keep phones away?*

Subgroup differences showed that racially minoritized school staff were more likely than White staff to report student distress (M = 2.18 vs. 1.91) and fear (M = 2.16 vs. 1.86). SPED staff also reported more student distress compared to general education staff.

Effectiveness and Preparedness

Staff expressed confidence in the overall effectiveness of the drill. A large majority (85%) agreed it was conducted effectively (M = 5.39) and that it helped both students (M = 5.14) and staff (M = 5.22) understand what to do in a real emergency. On average, staff felt more prepared because of the lockdown drill (M = 5.00) and reported strong understanding of their roles during

drills (*M* = 5.53). Confidence in their ability to follow emergency directions in a real experience was also high (*M* = 5.38). Finally, while 85% felt prepared to support students' emotional needs during (*M* = 5.02) and after (*M* = 5.00) the drill.

Despite the generally positive perceptions of effectiveness and preparedness, open-ended feedback indicated that school staff have questions around drill implementation. For example, one participant noted confusion around protocols for different scenarios:

> *Wish there was a better solution to locking the door in the moment. The use of magnets over the locked door were more efficient and made me feel safer. There are also many "what if" questions that arise after these drills from the students and I don't always know how to answer them.*

Role differences were consistent in this domain. Classroom teachers/aides reported lower perceptions of effectiveness (*M* = 5.34 vs. 5.56), preparedness (*M* = 4.94 vs. 5.33), and understanding (*M* = 5.17 vs. 5.47) compared to non-classroom staff. They also reported feeling less prepared to support students' emotional needs during (*M* = 4.98 vs. 5.28) and after the drill (*M* = 4.95 vs. 5.36). Racially minoritized staff reported greater overall preparedness (*M* = 5.19 vs. 4.98) and more strongly endorsed that drills help create a prepared school environment (*M* = 5.35 vs. 5.18) compared to White staff.

General Perceptions and Training Needs

School staff generally believe that lockdown drills help to create a more prepared school environment (*M* = 5.20). Although most staff expressed low concern about emotional consequences, a notable minority raised important concerns. About 20% agreed (somewhat agree or higher) that they worry about the long-term emotional impact of drills on students (*M* = 2.96), and 16% endorsed similar worries about their own well-being (*M* = 2.53). Finally, more than a quarter (27%) agreed that they would benefit from additional training on how to handle lockdown drills or emergency situations (*M* = 3.21). Open-ended responses provided insight into topics that may be helpful to continue discussing: "We need to know how to deal with the student's emotional needs via slides or even a short video."

Subgroup differences highlighted that female staff expressed greater worry about both students (*M* = 3.02 vs. 2.60) and themselves (*M* = 2.58 vs. 2.15) than male staff. Classroom teachers/aides also reported greater worry about their own well-being compared to non-classroom staff (M = 2.59 vs. 2.13). With regards to race, racially minoritized staff were significantly more likely than White staff to report a need for additional training (*M* = 3.83 vs. 3.10).

School Staff Results Summary

Preparation & Communication: Nearly all staff felt adequately prepared, with 96% reporting enough notice and sufficient training to carry out their role. Male staff expressed more confidence than female staff, while classroom teachers/aides reported slightly less notice and lower confidence than non-classroom staff. Racially minoritized staff more strongly endorsed the adequacy of training compared to White staff. Open-ended feedback highlighted the need for clearer protocols for students caught outside the classroom during drills.

Observations of Students: Most staff observed students as calm (92%) and following directions (91%), with few showing visible anxiety (11%) or fear afterward (12%). Still, concerns were raised about student seriousness, especially around distractions such as phone use. Racially minoritized staff and special education staff were more likely than their peers to report student distress or fear during drills.

Effectiveness & Preparedness: Staff generally viewed the drills as effective ($M = 5.39$) and felt they improved both student and staff readiness. Most reported confidence in their roles and preparedness to support students' emotional needs, though classroom teachers/aides reported lower effectiveness, preparedness, and emotional support readiness compared to non-classroom staff. Racially minoritized staff reported greater preparedness and stronger belief that drills help create a safer environment than White staff.

Concerns & Training Needs: While most staff were confident in drills' value, about 20% worried about long-term emotional impacts on students and 16% worried about their own well-being. Over a quarter (27%) expressed a desire for additional training, particularly around supporting students' emotional needs and handling "what if" scenarios. Female staff and classroom teachers/aides reported greater concern about emotional impacts, while racially minoritized staff were more likely to request additional training compared to White staff.

Overall Perceptions: Broadly, staff agreed that lockdown drills help create a more prepared school environment, though open-ended responses indicated lingering uncertainty about implementation details and emotional impacts.

Discussion

Findings from the current statewide study reflect growing alignment with Maryland guidelines and best practices on active assailant lockdown drills, while also revealing areas where implementation falls short.

Implementation Planning and Training

Best practice and Maryland law requires that schools conduct lockdown drills in a way that is developmentally appropriate, trauma-informed, and avoids simulated violence or role-playing as assailants. In line with these expectations, schools are generally conducting one to two lockdown drills per year and forming school-based planning teams to support implementation. However, the composition of these teams often lacks the diversity recommended by MCSS. For example,

school mental health professionals, special education staff, and community representatives were underrepresented on planning teams despite Maryland guidance emphasizing the importance of multidisciplinary involvement to address a wide range of student and staff needs. This is a missed opportunity, as inclusive planning is central to creating drills that are both effective and psychologically safe.

Guidelines also emphasize that all students and staff must receive training that is developmentally appropriate, inclusive, and emotionally supportive. Findings suggest strong coverage in this area: most students and staff received instruction through in-person, live sessions on what to do during a lockdown drill, and the vast majority found it helpful. Many schools also supplemented with teacher-led discussions, slides, and online modules. However, high school students and ELL were more likely than their peers to report recently reviewing drill steps, indicating variability in training coverage. School staff subgroup differences also emerged: racially minoritized staff more strongly endorsed the adequacy of training than White staff. Additionally, qualitative data indicate some gaps. Staff and students requested more detailed training on nuanced situations—such as what to do when students are in the hallways, bathrooms, or actively noncompliant—highlighting a need for more scenario-based guidance. Similarly, staff asked for clearer instruction on supporting students' emotional needs before, during, and after drills. These findings suggest that while training is widespread, its depth, inclusivity, and response to real-world scenarios must be expanded.

School Communication

Effective communication before and after drills is a central tenet of the MCSS Guidelines. The state mandates that families receive annual drill schedules, that staff and students receive advance notice of drills, and that parents/caregivers are notified after drills occur. While these expectations are being met in many schools, the study reveals considerable inconsistency. While students largely endorsed receiving timely information about the drill, school context surveys reveal they were commonly notified the day of. Similarly, while parents/caregivers moderately endorsed receiving communication before and after the drill, open-ended responses indicated uneven communication with some receiving no notification or only vague messages after the fact. These gaps risk increasing confusion or distress among students and families, particularly those with prior trauma histories. Clear, trauma-informed communication is critical not only for transparency and trust, but also for ensuring that families can emotionally prepare children and interpret their post-drill reactions.

Implementation Experiences and Quality

The quality of lockdown drill implementation is essential to meeting the dual goals of preparedness and psychological safety. Drills should be structured, calm, and taken seriously, avoiding chaotic or confusing scenarios that may traumatize participants. Staff overwhelmingly reported calm and compliant student behavior in quantitative measures, and most students said they could follow steps easily. Yet, one in five students reported problems such as peers talking

or disregarding directions, and staff echoed concerns about student engagement in qualitative feedback. Subgroup analyses revealed that middle school students were twice as likely as high school students to report that problems occurred during drills, and Black and other racially minoritized students more frequently observed mistakes compared to Asian students. Students receiving SPED services also reported higher rates of problems than their peers. These findings suggest that lockdown drill experiences vary across developmental stages and student groups, raising questions about equity in drill quality.

Accommodations

Accommodations for students with disabilities and English language learners are a legal and ethical imperative under both federal and Maryland law and national best practices. MCSS Guidelines emphasize the need for individualized support, inclusive materials, and translated content. While nearly half of schools reported offering some form of accommodation for students with disabilities—such as noise-canceling headphones, early notification, and individual support—only 20% of schools reported providing accommodations for ELL. Student data reinforce this gap: students receiving SPED services were less likely to report ease in following drill steps and understanding their purpose compared to their peers, while ELL reported lower ease of following steps compared to their non-ELL peers. These findings indicate that current accommodations may be insufficient and fall short of Maryland's guidelines for inclusive and proactive support.

Effectiveness

A core goal of lockdown drills is to prepare students and staff to respond calmly and decisively in the event of a real emergency. Survey findings suggest that most stakeholders believe drills are achieving this goal: students reported feeling more prepared, parents expressed increased confidence in school safety procedures, and staff felt capable of executing their roles. However, questions remain about the depth of this preparedness. Students raised concerns in open-needed responses about hypothetical scenarios not addressed in training—such as attackers being families with the school or peers being locked out. These uncertainties reveal opportunities to enhance instructional content. Additionally, high school students consistently reported greater preparedness than middle school students, while ELL, females, and non-SPED students also rated preparedness more highly than their peers. Among staff, non-classroom personnel reported greater preparedness than classroom teachers/aides. These subgroup differences suggest that preparedness benefits are not evenly distributed, with younger students, students with disabilities, ELL, and certain staff requiring additional, differentiated support.

Psychological Impact

A core principle of MCSS guidance is minimizing psychological harm. Most stakeholders did not report severe distress, and the majority of students and parents said drills did not upset children. Still, a meaningful minority expressed concern. About 18% of students reported feeling

upset or scared due to the drill, and 30% reported increased worry about safety at school following the drill. Females, Black, ELL, and SPED students reported higher distress than their peers. Parents observed few negative behavioral changes overall, though male parents were more likely than female parents to notice post-drill anxiety in their children. Similarly, White and other racially minoritized parents were more likely than Black parents to express concern about their child's long-term emotional impacts. Among staff, about one in five worried about long-term student impacts, and one in six worried about their own well-being. Female staff and classroom teachers reported higher concern than their counterparts. These subgroup differences highlight that while drills are broadly tolerated, certain populations are more vulnerable to negative emotional outcomes and warrant targeted support.

General Attitudes Toward Lockdown Drills

Despite concerns, most stakeholders endorsed the value of lockdown drills. Students reported feeling safer, parents viewed drills as improving school preparedness, and staff agreed drills enhanced both personal and school readiness. However, based on the subgroup differences and implementation challenges described in earlier sections, the strength of this endorsement may vary across populations and contexts. In other words, while drills are broadly viewed as beneficial, their perceived value may depend on factors such as communication quality, developmental stage, and the extent of accommodations provided.

Overall Contribution

This study affirms that Maryland schools are broadly aligned with state guidelines, and that most students, parents, and staff view lockdown drills as valuable for enhancing preparedness and safety. At the same time, the findings point to meaningful variability in how drills are experienced. Communication gaps, uneven implementation quality, limited accommodations, and subgroup differences in preparedness and emotional impact suggest that the perceived value of drills is not shared equally across all populations. Moving forward, efforts to strengthen transparency, tailor training and supports, and ensure accommodations are fully implemented will be critical for ensuring that the benefits of drills are realized equitably and consistently across school communities.

Implications and Recommendations

The State's guidelines, shaped by the MCSS and informed by trauma-informed best practices, have created a strong foundation. Still, variability in implementation and experiences across schools suggests that additional attention to communication, inclusivity, training depth, and emotional safety could further strengthen the consistency and impact of lockdown drills. These findings offer several implications for how schools, districts, and state partners might refine practices in the years ahead.

1. **Strengthen Inclusive and Multidisciplinary Planning:** Although most schools reported having designated planning teams, representation from school mental health professionals, special education staff, and community members remains limited. Inclusive planning is essential to designing drills that address diverse student needs. School systems should be encouraged to adopt multidisciplinary planning structures that center the voices of those best equipped to anticipate and mitigate risks for students and staff.
2. **Expand Scenario-Based and Role-Specific Training:** While in-person training was widespread and viewed as helpful, students and staff identified a need for more nuanced guidance. Training materials should include scenario-based modules that address complex real-world situations—such as drills during unstructured times, when students are in hallways, or when noncompliance occurs. Staff should also receive training on how to respond calmly, model leadership, and support students' emotional needs throughout the drill process.
3. **Improve Communication Practices:** Inconsistent communication with families and students was a recurrent theme. Advance and follow-up communication should be timely, clear, and trauma-informed. Schools are encouraged to provide proactive notifications that include the purpose, expectations, and emotional supports available before and after drills. This is particularly critical for families with trauma exposure or concerns about emotional distress. Schools may also consider classroom debriefs and counselor-facilitated check-ins to reinforce student safety and promote emotional processing.
4. **Promote Student Engagement without Harm:** While drills were generally reported as calm and well-followed, both students and staff noted that some students failed to take drills seriously. This undermines the efficacy of drills and may create false confidence in preparedness. Educators should be provided with messaging strategies to build student buy-in, including discussions about why drills matter and how they contribute to collective safety. These messages should build promote commitment without provoking fear or distress.
5. **Address Equity Gaps for Vulnerable Populations:** Findings indicate that accommodations and differentiated supports are not only underutilized but also urgently needed to ensure equity in preparedness and psychological safety. State and local agencies should move beyond simply requiring accommodations to adopting equity-focused strategies that ensure drills are accessible, developmentally appropriate, and psychologically safe for all students. This may include proactive identification of vulnerable groups, differentiated training and supports, and monitoring systems to track whether equity gaps are closing over time.
6. **Establish Feedback Loops for Continuous Improvement:** While many schools collect some form of feedback, one in four administrators reported receiving no stakeholder feedback about drills. Without systematic reflection, opportunities for improvement are lost. Schools and districts should implement structured feedback systems after each drill,

gathering input from students, families, and staff on communication, implementation, preparedness, and emotional impact. These data should be shared with MCSS to inform statewide research, and local teams should be expected to act on findings to refine future drills. Continuous improvement, rooted in stakeholder voice, is critical to ensuring that drills are both effective and supportive of well-being.

Next Steps: Year 2 Priorities and Future Research

Building on the findings from Year 1, the next phase of this study will focus on translating data into actionable guidance, expanding research efforts, and ensuring continued stakeholder engagement. Key priorities include:

1. **Update the MCSS *Best Practice Guidelines for Active Assailant Emergency Preparedness*.** Study findings will be used to revise the MCSS Guidelines. These updates will include more detailed recommendations on inclusive planning teams, communication timeliness, and accommodations for diverse learners.
2. **Develop Data-Informed Resources for Students, Families, and Staff.** A series of accessible, stakeholder-specific resources will be created to directly address the most common questions, concerns, and misconceptions raised in the open-ended survey responses. These documents will use plain language and trauma-informed framing to foster trust and transparency. Dissemination will occur through MCSS communication channels, school district websites, and community-based outreach to ensure wide access and understanding.
3. **Continued Collaboration with the MCSS Youth Advisory Board.** Partnership with the Youth Advisory Board will continue to ensure student voice remains central in interpreting findings and shaping dissemination. Youth leaders will help co-design communication tools such as infographics, videos, and presentations that speak directly to student audiences. Their insights will also inform updates to survey tools and influence Year 2 data collection priorities.
4. **Update the Literature Review to Reflect Emerging Evidence.** The research team will conduct an updated review of empirical and policy literature published since the initial scan. This review will deepen the evidence base on trauma-informed and culturally responsive drill practices, psychological impacts across diverse student populations, and emerging best practices in school emergency preparedness. Updated findings will be integrated into guidance revisions, survey refinements, and dissemination materials.
5. **Advance Future Research on Equity, Context, and Implementation.** Future research should move beyond descriptive subgroup differences to examine how both individual experiences and school-level implementation practices shape outcomes. Multilevel modeling (MLM) can be used to account for the nesting of students within schools and to test how contextual factors—such as urbanicity, Title I status, school size, and the diversity of planning teams—relate to perceptions of preparedness, emotional impact, and safety. Research should also assess how specific implementation practices (e.g.,

communication timing, training methods, use of accommodations, and fidelity to state guidelines) influence stakeholder outcomes. Additional work should explore intersectional identities (e.g., race × disability, gender × language background). Incorporating both quantitative and qualitative methods, and tracking outcomes over time, will provide a more nuanced understanding of equity and implementation in lockdown drills and guide refinements to policy and practice.

Limitations

While this statewide study provides valuable and comprehensive insights into how students, families, and staff experience active assailant lockdown drills, several limitations should be acknowledged when interpreting the findings. While survey instruments were refined through cognitive interviews and pilot tested, some items may still have been interpreted inconsistently across grade levels or stakeholder groups. Future research should conduct psychometric analyses to establish the strength and stability of the measures. Additionally, participation in the survey was voluntary and uneven across schools and districts, which limits generalizability. Future research should employ strategies to ensure more representative samples across districts and stakeholder groups. Finally, reliance on self-report surveys introduces social desirability. Future research should triangulate findings with observational data, administrative records, or more rigorous mixed method approaches to enhance examination of constructs.

Conclusion

This report represents the first comprehensive, statewide examination of the effectiveness and psychological impact of active assailant lockdown drills in Maryland public schools. Grounded in a rigorous literature review, stakeholder-informed survey development, and mixed-methods data analysis, the study offers timely insights into how drills are experienced by students, families, and school staff. Findings highlight critical gaps in communication, accommodations, and preparedness for complex scenarios. Importantly, stakeholders largely support the value of drills but also voiced a clear desire for more meaningful engagement, transparency, and emotional support throughout the process.

The implications of this work extend beyond Maryland. As school systems across the country grapple with the dual mandate of preparing for emergencies while protecting student well-being, this study provides a model for how to ground safety practices in evidence, equity, and lived experience. By centering stakeholder voices, committing to continuous improvement, and embedding equity at every stage, Maryland is laying the foundation for a safer and more compassionate approach to emergency preparedness in schools.

Appendix A. Terminology

Active Assailant: An active assailant is an individual who is actively engaged in harming or threatening harm to students, staff, and visitors within a school setting.

Active Assailant Lockdown Drill: An active assailant lockdown drill refers to a lockdown drill where the primary focus is on preparing students, staff, and emergency responders to effectively respond to an imminent threat posed by an individual intending to cause serious injury or death (i.e., active assailant).

Culturally Responsive: Cultural responsiveness refers to acknowledging and incorporating diverse identities, values, and norms into all aspects of school life, including lockdown drill policies and practices.

Equity: Equity refers to policies and practices that ensure every student receives the specific resources and support they need to succeed. In the context of lockdown drills, equity refers to ensuring all students have the specific resources and support they need to engage in lockdown drills and receive positive outcomes (e.g., preparedness, and confidence in implementing lockdown procedures) from them.

Lockdown Drill: Lockdown drills refer to the practice of a set of procedures designed to create a physical barrier between students and the active threat in the event of an actual emergency. The goal of drills is to prepare students and staff to respond to emergencies using best practices. Lockdown drills include procedures for quickly securing classrooms, creating physical barriers, and minimizing exposure to the threat, as well as protocols for communication, coordination with law enforcement, and support for individuals affected by the incident.

Psychological Impact: Psychological impact refers to the effects of a stimulus on the mental and emotional state of a person. For this literature review, psychological impact refers to the socioemotional impact of lockdown drills on students, staff, and caregivers.

Trauma: The Substance Abuse and Mental Health Services Administration (SAMHSA) defines trauma as “an event of circumstance resulting in physical harm, emotional harm, and/or life-threatening harm. The event or circumstance has lasting adverse effects on the individual’s mental health, physical health, emotional health, social well-being, and/or spiritual well-being.”

Trauma-Informed Care: Trauma-informed care is a framework that guides the delivery of services in schools. School staff who are trauma-informed understand the widespread impact of trauma on students’ learning and behavior and respond with practices and policies that are sensitive to such knowledge.

Appendix B. Sample Characteristics

School Characteristics (n = 59)

	n (% of sample)
Grade Level Served	
K-5th Grade	14 (23%)
6th-8th Grade	11 (19%)
9th-12th Grade	9 (15%)
Other	16 (27%)
Urbanicity	
Urban	4 (7%)
Suburban	28 (48%)
Rural	18 (331%)
% Free or Reduced Lunch	
Less than 25%	10 (17%)
25-50%	19 (32%)
51-75%	12 (20%)
More than 75%	8 (14%)
Title 1 Status	
Yes	17 (29%)
No	33 (56%)
Community School	
Yes	17 (29%)
No	32 (54%)
Student Racial Demographics	
Primarily White	20 (34%)
Primarily Racially Minoritized	17 (29%)
Racially Diverse	11 (19%)

Note: Not all frequencies add to 100% due to missing data. PI = Pacific Islander.

Appendix B. Sample Characteristics Continued

Student Characteristics (n = 7,597)

	n (% of sample)
Gender	
Male / Boy	3,512 (46%)
Female / Girl	3,688 (49%)
Non-binary / Third gender	78 (1%)
Prefer to self-describe	97 (1%)
Prefer not to respond	184 (2%)
Race	
American Indian or Alaska Native	212 (3%)
Asian	1,321 (17%)
Black/African American	1,367 (18%)
Native Hawaiian or Other PI	45 (>.1%)
White/Caucasian	2,779 (37%)
Bi- or Multi-Racial	573 (8%)
Middle Eastern or North African	205 (3%)
Not Listed	1,185 (16%)
Ethnicity	
Hispanic or Latino	1,830 (24%)
Not Hispanic or Latino	5,317 (70%)
Grade Level	
6th Grade	1,974 (26%)
7th Grade	1,490 (20%)
8th Grade	1,483 (20%)
9th Grade	318 (4%)
10th Grade	265 (4%)
11th Grade	229 (3%)
12th Grade	178 (2%)
Primary Language	
English	5,755 (76%)
Non-English	1,736 (23%)
Program Enrollment	
Special Education	421 (6%)
English Language Learner Program	287 (4%)
Gifted and Talent	840 (11%)
Free or Reduced-Price Lunch	598 (8%)

Note: Not all frequencies add to 100% due to missing data. PI = Pacific Islander.

Appendix B. Sample Characteristics Continued

Parent Characteristics (*n* = 696)

	n (% of sample)
Gender	
Male / Man	95 (14%)
Female / Woman	570 (82%)
Prefer not to respond	29 (4%)
Race	
American Indian or Alaska Native	3 (>1%)
Asian	27 (4%)
Black/African American	41 (6%)
Native Hawaiian or Other PI	1 (>.1%)
White/Caucasian	531 (76%)
Bi- or Multi-Racial	17 (2%)
Middle Eastern or North African	1 (>.1%)
Prefer not to say	56 (8%)
Not Listed	13 (2%)
Ethnicity	
Hispanic or Latino	53 (8%)
Not Hispanic or Latino	569 (82%)
Grade of Child(ren)	
K-5th Grade	146 (21%)
6th-8th Grade	262 (38%)
9th-12th Grade	109 (16%)
Child Special Education Recipient	
Yes	55 (8%)
No	465 (67%)

Note: Not all frequencies add to 100% due to missing data. PI = Pacific Islander.

Appendix B. Sample Characteristics Continued

School Staff Characteristics (*n* = 1,054)

	n (% of sample)
Gender	
Male / Man	203 (19%)
Female / Woman	792 (75%)
Non-binary / Third gender	2 (>1%)
Prefer to self-describe	3 (>1%)
Prefer not to respond	52 (5%)
Race	
American Indian or Alaska Native	5 (>1%)
Asian	36 (3%)
Black/African American	70 (7%)
Native Hawaiian or Other PI	2 (>.1%)
White/Caucasian	849 (81%)
Bi- or Multi-Racial	31 (3%)
Middle Eastern or North African	1 (>.1%)
Not Listed	42 (4%)
Ethnicity	
Hispanic or Latino	59 (6%)
Not Hispanic or Latino	827 (79%)
Prefer not to respond	94 (9%)
School Role	
Classroom Teacher / Teacher Aide	877 (83%)
Instructional Support Personnel	102 (10%)
Administrator	20 (2%)
Operations	44 (4%)
Grade Level Service	
K-5th Grade	415 (39%)
6th-8th Grade	494 (47%)
9th-12th Grade	1,020 (97%)
General/Special Education Service	
General Education	603 (57%)
Special Education	111 (11%)
Both	149 (14%)

Note: Not all frequencies add to 100% due to missing data. PI = Pacific Islander. Grade level may exceed 100% due to service across schools.

Appendix C. Survey Items

Student Survey

1. Did your school tell you ahead of time that a lockdown drill was going to happen? [Y/N]
2. Did your school recently teach you or review what to do during a lockdown drill? [Y/N]
    a. *If Yes:* Did you feel prepared for the lockdown drill because of the training you received? [Y/N]
    b. *If No:* How long ago did your school teach or review the steps of lockdown drills with you? [Options, including they never have]
3. Were there any mistakes or problems during the drill? [Y/N]
    a. What were some of those mistakes or problems? [QUAL]
4. Were students with different needs (like those who need extra help) able to participate safely in the lockdown drill? [Y/N/I'm Not Sure]
    a. *If No:* Why were students with different needs not able to participate safely in the lockdown drill?
5. My teacher helped us follow the directions during the lockdown drill. [Likert]
6. My teacher helped us stay calm during the lockdown drill. [Likert]
7. I was able to follow the steps of the lockdown drill easily. [Likert]
8. The lockdown drill helped me feel ready to handle a real lockdown emergency. [Likert]
9. I know what to do in a real lockdown emergency to keep myself safe. [Likert]
10. Students at my school take lockdown drills seriously. [Likert]
11. I understand why we have lockdown drills. [Likert]
12. The lockdown drill made me feel upset or scared. [Likert]
13. I feel safer at school knowing we practice these drills. [Likert]
14. The drill made me feel more worried about my safety at school. [Likert]
15. Is there anything else you would like to share about the lockdown drill? [QUAL]

Appendix C. Survey Items Continued

Parent Survey

1. My child's school informed me about the lockdown drill before it happened. [Y/N]
2. My child's school communicated to me about the lockdown drill after it was over. [Y/N]
3. I received enough information about the lockdown drill beforehand to reassure my child. [Likert]
4. My child's school communicated with me about the drill effectively. [Likert]
5. I understand the purpose of the lockdown drill at my child's school. [Likert]
6. The lockdown drill was conducted effectively. [Likert]
7. I believe my child is better prepared for a real lockdown emergency because of the drill. [Likert]
8. I am comfortable with my child participating in lockdown drills. [Likert]
9. My child talked to me about the lockdown drill when they came home. [Y/N]
10. My child seemed upset over the lockdown drill. [Y/N]
11. I noticed negative changes in my child's behavior after the lockdown drill (e.g., trouble sleeping). [Y/N]
    a. What negative changes did you notice in your child's behavior after the lockdown drill? [QUAL]
12. My child experienced physical reactions (e.g., stomachaches, headaches) after the lockdown drill. [Y/N]
13. My child became more clingy or showed signs of separation anxiety after the lockdown drill. [Y/N]
14. My child needed extra reassurance about their safety at school after the lockdown drill. [Y/N]
15. My child expressed a desire to avoid going to school after the lockdown drill. [Y/N]
16. My child seemed confused or did not fully understand the purpose of the lockdown drill. [Y/N]
17. I worry about the long-term emotional impact of lockdown drills on my child. [Y/N]
18. The drill made me feel more confident in my child's school safety procedures. [Y/N]

19. I believe that lockdown drills help create a more prepared school environment overall. [Y/N]
20. Is there anything else you would like to share about the lockdown drill? [QUAL]

Appendix C. Survey Items Continued

School Staff Survey

1. I received enough advance notice about the lockdown drill to prepare students. [Likert]
2. I received enough advance notice about the lockdown drill to review emergency procedures. [Likert]
3. I understand the purpose of the lockdown drill. [Likert]
4. The training I received was adequate to prepare me for my role in the lockdown drill. [Likert – with a did not receive training option]
5. During the lockdown drill, most of my students appeared calm. [Likert]
6. During the lockdown drill, most of my students followed directions. [Likert]
7. During the lockdown drill, most of my students showed signs of distress (e.g., visible anxiety). [Likert]
8. After the lockdown drill, several students expressed fear or discomfort about the experience. [Likert]
9. I feel the drill was conducted effectively. [Likert]
10. The lockdown drill helped students understand what to do in a real lockdown emergency. [Likert]
11. The lockdown drill helped me understand what to do in a real lockdown emergency. [Likert]
12. The lockdown drill helped me feel more prepared for a real lockdown emergency. [Likert]
13. As a [role here], I understand my role during lockdown drills at my school. [Likert]
14. I am confident that I can follow the lockdown drill directions if a real emergency happens. [Likert]
15. I felt prepared to support students' emotional needs during the lockdown drill. [Likert]
16. I felt prepared to support students' emotional needs after the drill. [Likert]
17. I worry about the long-term emotional impact of lockdown drills on students. [Likert]
18. I worry about the long-term emotional impact of lockdown drills on myself. [Likert]
19. I would benefit from additional training on how to handle lockdown drills or emergency situations. [Likert]

20. I believe that lockdown drills help create a more prepared school environment overall. [Likert]
21. The lockdown drill made me feel more confident in my school's safety procedures. [Likert]
22. Is there anything else you would like to share about the lockdown drill? [QUAL]

Appendix C. Survey Items Continued

School Context Survey

1. What is your current role in your school? [Multiple Choice]
2. What grades are served at your school [Multiple Choice]
3. Which of the following best describes your school's location? [Multiple Choice – Urbanicity]
4. What percentage of students at your school are eligible for free or reduced-price lunch? [Multiple Choice]
5. Does your school have Title 1 Status? [Y/N]
6. Is your school a designated community school? [Y/N]
7. Which of the following best describes your student population? [Multiple Choice – Racial Demo]
8. Has there been a recent event in the school's history that may impact student, staff, and families' experiences with lockdown drills? [Y/N]
    a. Please briefly explain the event, including when it happened. [QUAL]
9. How frequently are lockdown drills conducted at your school each year? [Multiple Choice]
10. Who is involved in planning lockdown drills at your school? [Select all that apply]
11. How long before the lockdown drill were parents/caregivers first notified? [Multiple Choice]
12. How long before the lockdown drill were students first notified? [Multiple Choice]
13. How long before the lockdown drill were school staff first notified? [Multiple Choice]
14. Approximately how many minutes did the lockdown drill last? [Open-ended, whole #s only]
15. Were external agencies, such as law enforcement or emergency responders, involved in the implementation of the lockdown drill? [Y/N]
    a. If yes, what external agencies were involved in the implementation of the lockdown drill and how were they involved? [QUAL]
16. What feedback, in general, have you received from school staff, students, or parents about conducting lockdown drills? [Multiple Choice]

    a. Is there additional context for the feedback? [QUAL]

17. How were students trained or prepared for the lockdown drill? [Select all that apply]
18. How were school staff trained or prepared for the drill? [Select all that apply]
19. How were students and school staff notified of the lockdown drill on the day it took place? [Select all that apply]
20. Was the lockdown drill modified in any way to accommodate students with disabilities? [Y/N]
    a. If yes, please describe. [QUAL]
21. Was the lockdown drill modified in any way to accommodate English language learners? [Y/N]
    a. If yes, please describe. [QUAL]
22. Is there anything else you would like to share about the lockdown drill implementation at your school? [QUAL]