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A Thematic Analysis of Teacher Experiences During Active Shooter Lockdown Drills

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Abstract

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Keywords

school lockdown drills, school safety, teacher resilience, thematic analysis, qualitative research

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A Thematic Analysis of Teacher Experiences During Active Shooter Lockdown Drills

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Teachers are tasked with ensuring that those under their care are safe and protected, yet the lack of evidence supporting the specific needs and experiences of teachers during active school shooter lockdown drills is alarming. The current study used live-action, virtual reality (VR) technology to simulate 36 active school shooter scenarios to explore teachers' experiences related to lockdown procedures and response protocols. Using thematic analysis and structured qualitative data, 355 descriptive responses from 11 teachers across 396 scenarios were coded and analyzed for explicit and implicit themes and sub-themes. Three overarching themes—humanistic care, enacted care, and professional duty—describe how teachers negotiate demands placed upon them during an active shooter lockdown. The findings reflected internal and external responsibilities for teachers in protecting and caring for others. Implications for school safety policies, active shooter response protocols, and ways to support teacher resilience as part of emergency response procedures are discussed.

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Introduction

Since the 1999 shooting at Columbine High School, over 356,000 students in the United States have experienced gun violence at school (Cox et al., 2023). Within the last two decades in the U.S., approximately 300 primary or secondary school shootings have occurred. While numbers in the U.S. are disproportionately high (Freilich et al., 2022), 17 and 19 school shootings have been reported in Mexico and Canada, respectively, including the Ecole Polytechnique shooting in Montreal, Quebec that resulted in 15 fatalities (World Population Review, 2023). South Africa, Nigeria, Pakistan, Afghanistan, Brazil, and France also have documented cases of school shootings. While numbers vary significantly by country due to different definitions and criteria, the frequency and severity of mass shootings is the subject of heated national and international debates around gun control and school safety (Silva, 2022). Highly publicized incidents, such as the Sandy Hook Elementary School shooting in 2012, have ignited major reforms in school response procedures for active shooter events. While the statistical likelihood of a school shooting is extremely low, around one in 614,000,000, school shootings remain the deadliest form of school-based violence (Ropeik, 2018; Verlinden et al., 2000). Legislators have called for schools to become a “harder target,” citing a need for more school resource officers (SRO), metal detectors, and safety screening of students and visitors (Kamenetz, 2018). Threat assessment and reporting teams are becoming more common, and, in at least 40 U.S. states, active shooter drills are required (Everytown Research & Policy, 2020).

Research on Lockdown Drills

Lockdown drills are designed to prepare and train students and staff for a wide range of school-based critical incidents, one of which is an active shooter event. During the 2017-2018 school year, approximately 4.1 million students experienced at least one active shooter drill (Cox & Rich, 2018). Traditional lockdown drills include moving to a safe location, locking the door, and staying quiet. Multi-option drills include additional actions such as barricades or actively resisting an intruder (Schildkraut et al., 2020). While becoming a routine component of school emergency plans, investigations regarding the impact and efficacy of differing lockdown drill protocols are limited, inconclusive, and politically charged.

There have been calls to end lockdown drills through joint statements from advocacy groups, including the National Education Association and Everytown for Gun Safety (Everytown Research & Policy, 2020; Schildkraut et al., 2020). Critics cite lockdown drills as psychologically harmful for children (Huskey & Connell, 2021; Rygg, 2015), but these initiatives fail to adequately define drills and lack a sound evidence base (Schildkraut & Nickerson, 2022). A lockdown drill is focused on the passive act of hiding and securing a location, whereas a multi-option (or options-based) active shooter drill provides participants with a range of strategies to consider, including evacuation and taking more active measures if necessary. Multi-option drills typically utilize more realistic means (airsoft guns and actors) to increase fidelity and realism (Schildkraut & Nickerson, 2022). A lockdown drill is considered more traditional in the context of school safety drills because it has been a widely adopted and practiced procedure for many years, well before the development and implementation of more comprehensive option-based active shooter drills.

Jonson et al. (2020) found that multi-option drills are associated with reduced casualties, but Frosch (2014) states that the use of “simunition” exercises raises anxiety for students and staff. Regarding lockdown drills, Shalchi (2019) claims that children have trouble distinguishing a drill from reality and Waselewski et al. (2020) report students feel less safe at school following lockdown drills and preparedness education. Conversely, others associate practicing active shooter response procedures with increased feelings of preparedness, heightened response efficacy, and a greater sense of school safety (Dickson & Vargo, 2017; Perkins, 2018; Schildkraut & Nickerson, 2020).

Gaps and inconsistencies within the lockdown drill literature, while troubling, are not without reason. Researching the effectiveness of lockdown drills during an active shooter event is difficult due to ethical limitations of controlled experiments, a lack of real-world data, the absence of standardized protocols across schools and districts, and practical constraints (Newman et al., 2017). Further complicating the issue is that discourse around school lockdown drills has become politically charged and closely tied to debates over gun control and school safety policies. Advocates for gun control argue that lockdown drills do not address the root causes of school violence and more comprehensive measures are needed (Everytown Research & Policy, 2020). Others have used lockdown drills to argue against gun control measures and promote the idea of “hardening” schools to protect students (Walker, 2019). To this end, more than \$3.1 billion was spent on school security in 2021, and annual growth projections of the educational security marketplace are projected to grow by 9% through 2026 (Morabito, 2022).

The politicized nature of these debates and a dearth of evidence to inform recommendations has made it difficult for schools and communities to find “common ground” on ways in which schools should conduct lockdown drills (Schildkraut & Nickerson, 2022, p. 59). While not a national standard, the National Association of School Psychologists (NASP), the National Association for School Resource Officers (NASRO), and Safe and Sound Schools, a non-profit organization for school safety, put forth best practices for conducting lockdown drills in schools, which highlight the need for carefully planned drills and establishing a school

safety team (NASP et al., 2021). Scholars suggest differentiating between option-based and traditional lockdown drills, with the latter more promising in terms of psychological safety (Schildkraut et al., 2020) and in alignment with Federal government recommendations (DeVos et al., 2018; U.S. Department of Education, 2019).

Teacher Impact

Research initiatives to investigate the impact of lockdown drills on students are valuable and most certainly needed, but the lack of evidence supporting the specific needs and experiences of the teachers in having to implement complex, and often stress-inducing, lockdown protocols is alarming (Schildkraut et al., 2020). Increased acts of violence within a school are associated with fragmented school climates, chaotic school structures, and deficient administrative and peer support systems (Espelage et al., 2013). The link between safety concerns and teachers leaving the profession, reduced classroom efficacy, and decreased levels of teacher resilience is well established (Fox & Stallworth, 2010; Prilleltensky et al., 2016; Smith & Smith, 2006). Even anticipating school violence is associated with increased stress and decreased self-efficacy for teachers (Bounds & Jenkins, 2016).

When teachers feel safe in their environments, their ability to protect and support students is enhanced (Olive, 2019). Within the context of lockdown drills, safety concerns erode teacher confidence in their ability to respond to school violence (Rider, 2015). Teacher perceptions of school safety and active shooter preparedness are positively associated with being able to effectively respond to an actual event (Davis et al., 2019). Thus, understanding teachers' perceptions and experiences related to lockdown drills is critical as they are tasked with the responsibility of ensuring that those under their care are safe and protected.

Purpose

Despite notable efforts of research and school advocacy communities, an integrated and systemized approach to active shooter response protocols informed by teacher experiences with lockdown drills remains absent from the literature. Combined with the lack of a national standard, questions regarding the psychological impact of lockdown drills, and the dearth of evidence regarding teacher perceptions of lockdown drills, an investigation of teacher experiences and meanings associated with carrying out protocols during an active shooter event was needed. Teachers are vital to supporting lockdown response protocols and being able to respond with confidence and fidelity is vital to protect the whole school community. To this end, the current study aims to offer informative and supportive insights regarding teacher perspectives on lockdown drills to school administrators, educators, and personnel associated with school and community safety. By elucidating teacher voice, we emphasize the critical role that teachers play in augmenting drill efficacy, mitigating emotional distress, resolving communication and coordination challenges, and nurturing a conducive school safety environment.

Lochmiller (2021) highlights the importance of research questions in framing thematic inquiry. Accordingly, the purpose of our investigation was to understand how teachers experience lockdowns and their role in response protocols. As such, the following research questions guided our inquiry: (1) What are teachers' experiences during an active shooter simulation? and (2) What experiences and meanings are associated with a teacher's role in lockdown procedures during an active shooter simulation?

Method

The current study was part of a larger investigation that used VR to examine the efficacy of operational concepts, specifically automatic door locks, centralized lockdown notifications, and the presence of a school resource, hypothesized to increase student safety during an active shooter event (see Cybersecurity and Infrastructure Security Agency, 2020). In addition to the quantitative evidence collected to evaluate the concepts, a qualitative phenomenological approach was implemented to capture the direct experiences of teachers. Accordingly, we align with Williams' (2021) definition of phenomenology, "the study of that which can be experienced" (p. 367).

Theoretical Framing

We adhere to a social constructivist position that knowledge is socially positioned and shaped by various contextual dimensions of participants' collective experiences (Creswell & Poth, 2016). Epistemologically, we believe in the co-creation of knowledge that is intimately generated through relationships established during the research process. Regarding axiology, we believe that values, beliefs, and biases heavily influence an individual's reality, which requires continuous reflexivity and bracketing. We explain our reflexivity process in the "Trustworthiness" section.

Reflexivity Statement

The first author is an assistant professor in counselor education specializing in lockdown protocols in schools. She completed both a doctoral and a master's degree in counselor education and supervision and is influenced by her previous experiences as a disaster behavioral health responder, prior and current research on the emotional impact of lockdown, and as a parent of school-age youth. The second author is a doctoral student in educational psychology with experience in neuroscience, self-efficacy for self-regulated learning, and research in adolescents. She completed her master's degree in educational psychology and is influenced by her previous and current experiences working in the field of applied behavior analysis therapy, physical education, and emergency management. The third author is an assistant professor of special education with expertise in teacher preparation, teacher well-being, and adult learning. We identify as White, cisgender women of European descent. Our collective interest in this topic is grounded within the first author's research and experience as a disaster behavioral health responder for active shooter events, the second author's experience in emergency medical response, and the third author's work and research around teacher well-being.

Participants

Following Institutional Review Board (IRB) approval from George Mason University, 11 teachers from the mid-Atlantic region of the United States volunteered to participate in 36 VR active school shooter scenarios within a simulated high school environment. Teacher recruitment involved sending emails to all high school principals (N = 28) within three nearby school systems, providing them with study details and requesting them to distribute this information to their teaching staff. The term "local" was defined as schools situated within a one-hour radius of the research site. Teacher participants were required to have experience with school lockdown drills and at least two years of secondary classroom teaching experience within a suburban school system. While the sample characteristics were intended to account

for circumstances in which active shooter events are more frequently reported (Cox et al., 2023), individuals with prior exposure to an active shooter event were excluded due to ethical concerns associated with psychological risk.

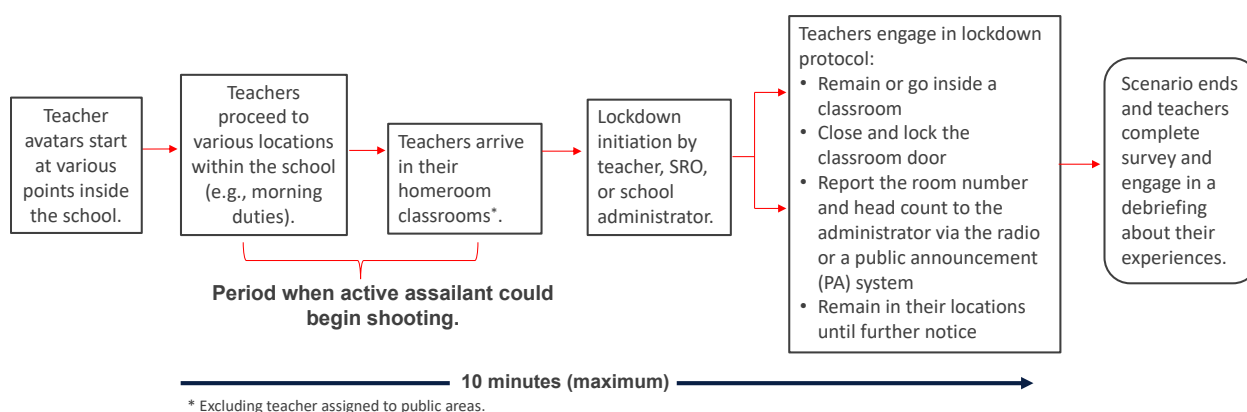
The final sample included six females (54.55%) and five males (45.45%), with a median age of 27 ($m=30.27$, $SD=10.69$). Regarding racial identity, six (54.55%) teachers identified as White/European American, three (27.27%) as Asian/Asian American, one (9.09%) as Black/African American, and one (9.09%) as Middle Eastern/Middle Eastern American. Excluding one teacher with 41 years of experience, mean teacher experience was six and a half years. To add realism and increase fidelity within the VR environment, 19 university students (role-playing high school students and the active assailant), two SROs, and one school administrator were recruited to participate. Apart from the university students, all participants were currently employed in a profession associated with their roles. Though teacher participants interacted with other participants throughout each scenario, only data from the teacher sample was analyzed for this investigation.

Context and Procedures

The two-week, in-person, simulated experiment (SIMEX) was conducted from August 3 to August 14, 2020. The VR school environment was modeled after a suburban high school supporting 1,000 students and included classrooms, bathrooms, a teacher breakroom, a front office, and common spaces such as a cafeteria and a library. To replicate an actual school environment, 300 simulated students driven by artificial intelligence algorithms represented a typical student body distributed throughout the school.

Following two days of training, participants engaged in 36 VR scenarios in which an active school shooter event prompted the need for lockdown procedures. Each scenario included 10 teachers, 19 human-operated students, 300 simulated students, one armed active assailant, one armed SRO, and one school administrator. During each of the 36 scenarios, ten classrooms were utilized as homerooms, with one teacher and two students assigned to the same homeroom throughout the simulation. One teacher, not assigned to homeroom, roamed common space locations (i.e., the hallway, cafeteria, or library). Students, teachers, the active assailant, and the SRO were all in VR. A school administrator, not in VR, coordinated the lockdown procedures and provided situational awareness to the SRO and teachers over a communications system. See Figure 1 for a general description of each scenario.

Figure 1
Scenario Progression



Data Collection and Analysis

Data were collected via an electronic survey administered to each teacher participant immediately following each scenario. The survey consisted of three open-ended questions regarding teachers' observations (i.e., "What did you observe during the experiment run?"), actions taken during the scenario (i.e., "What actions did you take during the experiment run?"), and scenario events (i.e., "Briefly describe what happened during the run from your perspective."). The decision to have teachers record their experience independently was made to alleviate teachers from feeling like they were being evaluated and to allow them to privately share their experiences (Willig, 2013). A total of 347 survey responses were analyzed. Forty-nine responses were not collected due to technical issues during the scenario ($n=41$) or user error ($n=8$).

We used phenomenology, guided by social constructivism, to explore how teachers' made sense of their personal and social world during a simulated school shooting. We chose phenomenology to allow for detailed perceptions and understandings of each participant's experience and grounded our understanding in social constructivism to uniquely explore the social and contextual aspects of teachers' collective experiences (Creswell & Poth, 2016).

Data were analyzed using a six-step thematic analysis (TA) process (Braun & Clarke, 2006). We selected TA due to its flexibility and because it is not restricted to any theoretical framework (McLeod, 2011). The six steps include: (1) review data for familiarity, including notes and reflexivity, (2) use in vivo coding to outline initial observed patterns, (3) group extracted codes into themes, (4) review themes to ensure relation to the coded excerpts and the full dataset is accurate, (5) refine names, definitions, and relationships between themes, and (6) produce the report. We describe our data collection and analysis through these six steps.

Two raters independently analyzed the open-ended survey responses for dominant themes using MAXQDA, a qualitative data analysis program (VERBI Software, 2019). Following an initial review of the data, discussed in step one above, patterns were examined (step two). We used in vivo coding to extract ideas from the survey responses, recording the frequency of different codes across all teacher responses for each scenario and then again for individual teachers. A total of 29 initial codes were identified during this analysis phase. As noted in step three, general patterns within the quotes associated with each initial code were extracted and subsequently grouped into patterns and later refined to develop initial themes (Braun & Clarke, 2006). Coders then followed step four and reviewed the emergent themes to check their validity against quotes and the dataset when examined holistically. Step five was also implemented at this time, in which language used and associations built between themes were refined and dominant themes were cross-checked between raters and used to guide the member checking process described below. Member checking led to refinement and establishment of three overarching themes under which the emergent themes (now subthemes): humanistic care, enacted care, and professional duty. The final step in the analysis (step 6) was identifying illustrative examples and writing up a report based on the three overarching themes.

Member Check Focus Groups

Due to the nature of the study—specifically the shared, intimate experience of a two-week active shooter simulation—we used focus groups for member checking (Birt et al., 2016). One month after the simulation, using a semi-structured interview protocol, all teacher participants attended one of three-member check focus groups to ensure teachers' experiences had been accurately captured by the coding team (Step 5). Focus groups were required to have at least three participants and were scheduled based on teacher availability.

Focus group participants were asked to review the themes identified in the analysis and provide feedback on whether these themes accurately reflect their experiences and perspectives. Initial themes identified by the researchers guided the creation of the semi-structured focus group protocol, highlighting different aspects of the teacher experiences captured during initial coding. Sample questions included “Do these themes accurately reflect your experiences in the study?” and “Are there any other themes that you think should be included?” Instances in which the researchers sought to clarify patterns in the data were also included. A sample question for additional information, grounded in the initial theme of curiosity, was:

Teachers mentioned being curious, or wanting to seek out more information about the situation they were in. If this was a part of your experience, could you tell us more about this experience of curiosity and seeking more information during the [scenarios]?

Focus group feedback was used to refine the analysis and ensure that the themes accurately reflect the experiences and perspectives of the participants. All codes and themes arose solely from the survey responses, and no additional themes were added or modified based on the member checking focus group. However, member checking ensured that reviewer themes accurately captured the participant's voice. In the case of curiosity, for example, teachers explained during the focus groups that they were often curious about what was happening when they felt safe or “in a holding pattern,” interpreted by the research team as meaning they were behind a locked classroom door. Participants verified and deepened researcher understanding of the emergent themes, allowing establishment of the three primary overarching themes of humanistic care, enacted care, and professional duty.

Trustworthiness

To establish trustworthiness, coders maintained reflexive notes in which preexisting thoughts, ideas, and biases that may have influenced the coding process were recorded (Creswell & Poth, 2016). This step was repeated throughout the coding process so that coders could confirm the identified themes from the previous steps, address unclear information, and gather any information that may have been missed in our initial analysis. Triangulation of findings was achieved through multiple processes. Codes were initially generated and applied to contextual segments by two researchers separately, followed by a discussion on points of disagreement until complete agreement on all codes and sorting of these codes into higher-level topics (i.e., “candidate themes”; Braun & Clarke, 2006, p. 90) was achieved. Member checking was done through focus groups to confirm that the identified themes reflected participants' experiences. Lastly, a third researcher (the third author) was brought in to help confirm the researchers' interpretive process following the qualitative analyses and to support understanding of teachers' experiences within schools.

Results

Our investigation aimed to understand how teachers experience lockdowns and their role in response protocols. Using open-ended survey responses following engagement in a series of active shooter simulations using VR technology, data were coded using Braun and Clarke's (2006) six-step iterative process for thematic analysis. These steps included: (1) familiarization through immersion, (2) code generation, (3) theme development, (4) theme review, (5) naming and defining themes, and (6) report production with illustrative examples.

A total of 29 codes were identified during the first phase of analysis. The final analysis yielded three overarching themes ranging from micro (individual) to macro (systems) levels (Bronfenbrenner, 1989). These include (1) humanistic care (e.g., behavioral and affective cues within selves and others), (2) enacted care (e.g., situational awareness and information transfer), and (3) professional duty (e.g., the importance of lockdown protocols and responsibility for others). Embodied within all three themes, teachers' emphasis on reducing loss of life was apparent when teachers heard gunshots or when the active assailant was encountered. Teachers would frequently take extraordinary steps, including putting their own lives in danger, to comfort or save others. The following quote serves as an example:

I was in the hallway when the lockdown was called. I didn't have any students, so I waited a second to look around and then locked myself in my room. The admin then came on again asking if anyone had a location or description. I peeked my head out of my room and saw students and teachers in the glass breakroom start to panic. I then saw two people get shot and [I] started to run towards the stairs as I called to admin to tell them the shooter was in the purple hallway. Right after that, I died on my way to the stairwell to escape.

In the following section, we present a descriptive account of each theme utilizing the participants' voices. The presented excerpts from the participants were chosen as representative examples of identified themes. A summary of major themes, subthemes, and initial codes is presented in Table 1.

Table 1

Major Themes, Subthemes, Initial Codes and Supporting Excerpts

Theme/Subtheme	Initial Codes	Excerpt/Frequency
Humanistic care		
	<i>Stress:</i> When a teacher participant indicated feelings of discomfort because of their perceived responsibility to keep others safe.	First, an unidentified student walked into my room and said, "I'm lost." When I was asking for their name, they ignored me. I was very nervous because I didn't know who it was. (107)
	<i>Death:</i> When a teacher indicated an effective response, such as stress or fear, when someone in proximity to the participant died or a participant observed fatalities.	Even if we would've tried to go to our homeroom we would've died, because the teacher across the hall also died. (125)
	<i>Feeling Safe/Comfort*:</i> The alleviation of negative affect due to the actions of another participant or when a teacher indicated that no imminent threat to themselves or their students was present.	So, Mr. Joestar and I combined our classes into one big group for the lockdown to strengthen our unity and collective resolve of getting through the school shooting. I felt pretty comfortable with a large group being safe and secure. (66)

*Fear/Shock**: An emotional (e.g., not “registering” what was happening) or physiological (e.g., gasping) reaction to an unexpected event.

Frustration: When a teacher noted an emotional reaction or used language with emotional connotations when responding to an aspect of or event in the environment (e.g., not being able to lock doors or student behavior).

*Anxious/Panic**: When a teacher participant described feeling nervous and/or overwhelmingly uncertain for a period (rather than a momentary experience), such as witnessing the SRO engage with the active assailant, without feeling their life was at risk.

Affective Response to Others: When another teacher or a student indicated distress and teacher actively attended to that participant to reduce distress.

Teacher Presence: Teacher’s presence or absence influenced risk perception for others, either because a teacher went above and beyond to provide support or teacher absence led to increased difficulty or distress.

Alarm: When a teacher indicated, they were attempting to react quickly but felt they had poor judgement due to fear or surprise.

At one point, I opened my door to check if the shooter was near and was shocked and scared. I found the hallway and stairs full of bodies. (61)

There were a bunch of students in my classroom also, like more than usual, and three of them kept messing around and talking. I kept telling them to be quiet. They were messing with another student who was silent. Then that student got upset and told them to shut up. But it’s annoying when students are talking and I’m trying to tell them to be quiet, but they don’t. (42)

I locked the doors. Teacher A frantically kept saying "CLOSE THE DOOR CLOSE THE DOOR, HURRY!" As I was manually locking the door. (42)

I heard another teacher outside in the hallway screaming to be let in. I was trying to communicate back to make sure it was really him. Just as I was about to let him in, his voice got more panicked and then there were more gunshots and he stopped talking...the shooter must have been right outside. (32)

I responded to their call for a teacher and locked the doors with them and stayed with them until the end. (27)

I saw a student with a brown shirt trying to get into 200. The way the student ran at that door made me suspect him as the shooter. I closed my door fast, not knowing if it was a student. (23)

Enacted Care

Responsibility for Others	<p><i>Student and Teacher Safety*</i>: When a teacher actively attempted to relocate another participant to a safe location from a potentially unsafe location, the teacher was concerned about their ability to keep other students/teachers safe, or references to thinking about keeping others safe.</p>	<p>I would periodically tell the students to get to the back of the class and open the door to check and see if anyone is stuck in the hall or if the shooter is in the area. (201)</p>
	<p><i>Hiding</i>: When a teacher indicated an attempt to find physical, structural, or visual cover or protection between them and their students and the active assailant participant to inhibit contact with the active assailant.</p>	<p>I had my two students and locked the door and hid in the corner. (194)</p>
	<p><i>Running</i>: When a teacher made the decision that the safest protocol to keep students under their care safe was to relocate from one location within or outside the school.</p>	<p>I then saw two people get shot and started to run [with students] towards the stairs as I called to admin to tell them the shooter was in the purple hallway. (55)</p>
	<p><i>Student Compliance/Non-compliance*</i>: When teachers noted student participants were explicitly following/breaking rules or obeying/disobeying teacher requests.</p>	<p>One student was being obnoxious, running around and talking, outright disrespecting me. I found it annoying, even so, I have to adhere to the responsibility of protecting him. (18)</p>
Importance of Lockdown Protocols	<p><i>Executing Protocols (Action)</i>: When a teacher discussed their use of pre-existing protocols, processes, and procedures for working towards participant safety during a scenario.</p>	<p>Saw a student open classroom door, so I went back into classroom, closed door and went to back corner of room with one real student. (242)</p>
	<p><i>Executing Protocols (Locks)</i>: When a teacher noted the presence or utility of either exterior or automatic door locking mechanisms.</p>	<p>Then I heard students over the adjacent room - Room 211- asking if there's a teacher inside as they can't lock and secure the doors. (217)</p>
	<p><i>Protocol Deviations (Stress Induced)</i>: When a teacher indicated unintentionally breaking protocol or being unable to recall if they adhered to protocol because of reported emotional distress.</p>	<p>I ran past the staircase to the nearest classroom and shouted for the teacher's name. He didn't respond so I ran away back towards the front entrance. I wasn't thinking and forgot that there was also an exit in the stairway. (12)</p>

Professional Duty

Information Transfer	<p><i>Communications:</i> How teachers utilized their means of transmitting information to the school administrator and other teachers.</p> <p><i>Confusion:</i> When a teacher indicated not being able to understand what was happening in their environment, either due to another participant's behavior, events occurring in quick succession, or a lack of sufficient or conflicting information.</p> <p><i>Information Gaps:</i> When the teacher participant felt information was missing or unclear during communication or while decisions were being made.</p>	<p>I called it in over the PA that the shooter is in the purple hallway second floor and received verification from the admin. I confirmed it and took cover after. (151)</p> <p>I then saw two people get shot and started to run towards the stairs as I called to admin to tell them the shooter was in the purple hallway, but the admin got conflicting reports. I didn't know what was going on or what to do. (53)</p> <p>When we heard the first shots, some students were just leaving my class. I started yelling for all the students in the hall to get into my room since we don't know where the shooter is. (22)</p>
Situational Awareness	<p><i>External Cues (Auditory Stimuli/Gunfire*):</i> When a teacher recalled hearing a gunshot or gunfire or referenced someone being shot, a behavioral reaction was triggered.</p> <p><i>Direct Encounter:</i> When a teacher saw, spoke with, or was in physical proximity to the active assailant.</p> <p><i>Curiosity/Planning*:</i> Teacher's attempt to gather information about their current environment either because they perceived a potential threat or, in absence of immediate threat, wanted to provide information to the admin. In both cases, teachers used forethought to plan their actions and behaviors before carrying them out.</p>	<p>Gunfire went off, so I locked my door (82)</p> <p>I looked down the hallway and saw the shooter shoot a student. (327 excerpts)</p> <p>stayed outside my room briefly to see if anyone needed in my room and to see where the shooter might be coming from. (46)</p>

* Indicates two initial codes were merged into one subtheme.

Humanistic Care

The theme of humanistic care refers to the teacher's personal decision to care in adherence with an internalized sense of duty as a teacher to attend not only to physical safety but also to the general well-being of others. Humanism, differing from professionalism, includes a deep respect for humans individually and to humanity collectively with genuine concern for others (Goldberg, 2008). At the core of humanistic care is a micro, or individual level factor, that allows individuals (i.e., teachers) to be attentive to behavioral and affective

cues within themselves and others. Given the expressive, interpersonal nature of this theme, no subthemes were identified. Teachers expressed numerous internal affective responses such as stress, shock, frustration, anxiety, fear, and panic and predominantly focused their actions and concerns related to the affective state of others. The following quote, from a teacher who was later shot during the scenario, reflects this humanistic sense of duty, “I could hear talk about the shooter killing someone near the utilities closet, but thankfully the shooter did not hurt any of my homeroom students.”

Humanistic care went deeper than macro levels of enacted care and professional duty, with motivations stemming from a deep respect for human life and the general well-being of others. When teachers witnessed others in distress or in dangerous situations, such as a fatality, they noted their own internalized feelings of distress and, in many instances, altered their behavior to keep others safe. One teacher, reflecting on their decision to leave their locked classroom and go into another classroom with no teacher, noted: “There was no one in my room because they didn’t make it past the shooter. I saw [the shooting] and frantically ran in my room...after a minute I realized [another teacher] had died and the students in [the teacher’s] classroom were all alone...I had to get to them, so I ran out the door and finally got in with them. Can’t believe I didn’t get shot.”

Humanistic care was also evident when there was a conflict between the teacher’s internalized sense of duty and the actions of others around them. Specifically, when students did not comply with lockdown protocols teachers expressed frustration and interpersonal conflict. This conflict was especially relevant given that the teachers did not know the identity of the shooter. One teacher explained, “student unlocked the door, which they are not supposed to, and let himself in. I was wary of letting them in...we waited in the room for the rest of the run [scenario].” Another stated:

I had students who I didn't know rush into my room. I obviously allowed them all, even the one who was kind of shady. That student didn't talk and barely moved so I was concerned it was the shooter just hiding the gun and I had just locked myself and others in the room with him.

Teachers demonstrated humanistic care through frequent attempts to comfort others, which also seemed to reduce their own sense of fear. While not explicitly stated by teachers, teacher descriptions revealed that when they felt less fear, it was easier for them to provide support to others. Teachers recognized that by simply being present among other teacher and student participants, they were able to provide much needed support. The following excerpts demonstrate how teachers provided humanistic care through repeated supportive actions:

I was greeting students for class when I heard gunshots. I looked down the hallway and saw the shooter shoot a student. I then let a student and a teacher into my room and locked the door while the other teacher called to admin about the shooter. We stood in the corner and comforted the student who said they were scared.

So [another teacher] and I combined our classes into one big group for the lockdown to strengthen our unity and collective resolve of getting through the school shooting. I felt pretty comfortable with a large group being safe and secure.

Teachers frequently discussed observing the death of others and feeling fear and remorse that others were dying. One teacher recalled, “The student I was with peeked outside

the bathroom and was shot in front of my very eyes. I was scared for my students and myself at that point.” They also recalled several emotions around being afraid for their own lives or being shot during a scenario. One teacher said, “Out of nowhere I saw a student get shot and then registered the shooter. I froze and was confused, by the time I realized what was happening I was looking down the barrel of the gun and was shot.” Another noted:

I was in my homeroom thinking I was safe. Before I could close the door, she [another teacher] was shot out of nowhere. I was shocked when I saw the teacher get shot and confused on how to get out...In my mind, I thought I was next, but eventually I frantically ran with my students to another nearby classroom and closed the door.

Confusion and regret around not saving others or notifying others of the shooter’s location were more common than fear around dying. The following excerpts demonstrate teachers feeling regret about not being able to help others:

I was outside my homeroom; 2nd floor green hallway room 209 when I was shot...I believe [another teacher] was shot as well. I died early in the run [scenario], I failed to notify the admin or the whole school about the shooter.

I was covering both classes in the green hallway, Rooms 210 and 209. The shooter went inside Room 210 and sat at the center of [the] class. I interacted with all students, him included. When the room 210 got crowded, the shooter said, "hey look at my TI-84." I looked at him and saw a gun. I died before I could do anything.

Enacted Care

The theme of enacted care illustrates behavior aimed at keeping all individuals within the teacher’s vicinity safe and includes subthemes of responsibility for others and the importance of lockdown protocols. This micro level (e.g., individual level) supports the individual’s relationship with themselves and their environments. Inherent to the theme of enacted care is teachers’ primary focus on keeping everyone safe, their willingness to sacrifice their well-being for others, and their commitment to implementing lockdown protocols are part of their duties to protect those around them.

Responsibility for Others

Responsibility for others refers to how teacher participants emphasized the importance of their roles in keeping others safe, despite not always feeling they had control over the situation. Teachers discussed their responsibility relative to the idea of getting students and teachers to safety. One teacher noted their lack of control over the situation, “I tried to usher a student in my classroom, but they didn’t see me.” Teachers formulated plans to help other participants escape to a safe location, but this would often endanger the teacher’s life as they would encounter the active assailant. One teacher recounted, “I was on my way to lock and close my door when I was shot.” Teachers noted numerous instances in which they felt it was their job to keep participants around them safe. Teachers followed through on this responsibility by hiding with students in classrooms or escaping the building, despite not always feeling they had control over their safety. Teachers referenced several instances in which they jeopardized their own safety to protect others, at times resulting in their own

simulated death in the scenario. During one scenario, after going into the hallway to ensure students were securely locked inside classrooms, one teacher was shot, despite the fact they "...immediately retreated to my homeroom, but it was locked, and I had no time to open the door."

This responsibility for others' safety burdened teachers, particularly when they felt more people could have been helped. In trying to help students get to a secure classroom, one teacher said, "I was in the hallway right next to it [the door], so I was quicker with letting students in and locking the door [but] only one student ran for my door." Another teacher, noting their own distress while also trying to comfort others, stated, "When the shots were fired, I dragged two students of mine in. I locked the doors and told my students to take cover in the corners away from the door. We held hands until the run ended."

Teachers reflected that working to keep others safe also made teachers feel safe. One teacher described a related experience, saying, "comforted the student who said they were scared." The difficulty teachers discussed concerning door locks, particularly manual locks, was frustrating as this directly impacted on their ability to keep everyone safe. One teacher explained, "We were unable to find an unlocked classroom, so we went to the utility closet and I'm assuming the shooter saw us, because one of my students got shot."

Importance of Lockdown Protocols

Importance of lockdown protocols refers to the availability of preexisting procedures in helping teachers feel safer and more confident in their roles, as well as teacher recognition that deviation from protocols may be required as part of their duties to keep others around them safe. Teachers reported that lockdown protocols and adherence to these procedures helped them feel safer and more confident knowing how to proceed during a lockdown. Teachers associated protocols with their role as teachers in keeping others safe and observed that their initiation and adherence to lockdown procedures helped others feel safe. One teacher said, "heard shots, locked doors and initiated protocols for student safety." While deviations from protocols were infrequent, occurring primarily when others were in danger, teachers emphasized that autonomy to adapt protocols was required. Teachers did have to adapt their typical protocol to assist students by executing an action that only a teacher could perform, such as locking a door or using the public announcement (PA) system. One teacher stated:

I heard students over [in] the adjacent room - Room 211 - asking if there's a teacher inside as they can't lock and secure the doors. I responded to their call for a teacher and locked the doors with them and stayed with them until the end.

In other instances, teachers reported breaching protocols to protect others. One teacher explained they "checked the hallway for students even after the lockdown is called to make sure I give the shooter less targets."

Teachers frequently noted physical barriers to being able to follow lockdown protocols. Exterior locking doors, as opposed to doors that automatically lock when closed, were barriers due to the time required to engage the lock during a high-stress situation. One participant noted, "Instead of wasting time with my door, my students and I went to the room across [the hall] where the teacher let us in, and we stayed there the whole time." While not everyone had trouble with exterior locks (e.g., "I locked the door and locked down"), feelings such as anxiety, fear, and panic were more frequent when teachers were required to step outside the room to secure the classroom. These feelings were especially prevalent in scenarios where an SRO was not present, as explained by one teacher who said, "The [scenarios] with no school resource officer and manual locks, are the *worst* [emphasis added]."

External cues, such as the sound of gunfire or seeing fatalities, prompted teachers to respond quickly. The greater number of external cues, the more teachers expressed a heightened sense of urgency to complete lockdown protocols. At times, these pressures made teachers feel “caught off guard,” resulting in greater levels of expressed pressure to lockdown. For example, when gunfire was suspected to be nearby, one teacher said: “I locked the doors. Another teacher frantically kept saying ‘*Close the door! Close the door, Hurry!*’ [emphasis added] as I was manually locking the door.” External stimuli, such as hearing gunfire, also resulted in teachers deviating from protocol and securing their classrooms before an official lockdown announcement. Hiding was more frequently reported when teachers heard gunshots, often in combination with teachers quickly relaying information to others, “I had my two students and locked the door and hid in the corner.”

Teachers noted that adherence to protocols was highly dependent on the compliance of their students. Student non-compliance frustrated teachers and hindered their sense of duty to keep others safe. While these situations did not impact teachers’ sense of duty or decision-making, they did cause teachers to feel conflicted about their responsibility to protect the students. One teacher, who allowed additional students into their locked classroom, gave an example:

There were a bunch of students in my classroom also, more than usual, and three of them kept messing around and talking. I kept telling them to be quiet, but they wouldn't...it's annoying when the students are talking and I'm trying to tell them to be quiet, but they don't.

Professional Duty

The theme of professional duty relates to behavior geared towards keeping the whole school, rather than just individuals within the teacher’s vicinity, safe. Professional duty is a “mezzo” (e.g., community level) support in which the individuals’ experiences are influenced by their internal (individual) and external (environmental) factors. Two subthemes, situational awareness and information transfer, were identified.

Situational Awareness

Situational awareness refers to the importance of accurate and timely information and mitigating distress, as well as teacher understanding of what is happening in their environments and the impact of this knowledge (or lack of knowledge) on the safety of others within the school. Situational awareness is knowing what is happening around you regarding where you are, where you are supposed to be, or whether anyone or anything around you threatens your health or safety. Teachers had a heightened need for situational awareness, as evidenced by continuous attempts to gather information for the purpose of relaying it to others and information seeking when they felt information was missing. Teachers discussed this concept relative to the level of information transmitted (or not transmitted) to them by the school administrator and other teachers. After seeing the active assailant in the hallway, one teacher stated, “I called it in over the PA that the shooter is in the purple hallway second floor and received verification from the admin. I confirmed it and took cover after.”

The more situational awareness teachers felt they had, whether in their current environment or from the school administrator, the safer they felt. For example, another teacher reported, “The admin relayed the description of the shooter to the whole school, which I am thankful for.” In addition to reducing their fears, teachers would use information gained from others to support decision-making around professional duties. Teachers’ sense of professional

responsibility for those within the school prompted them to collect information to increase their situational awareness. One teacher said, “I would periodically tell the students to get to the back of the class and open the door to check and see if anyone is stuck in the hall or if the shooter is in the area.”

Unsurprisingly, a lack of situational awareness was associated with increased feelings of stress and confusion. When teachers were missing information about the location and description of the shooter, these feelings were amplified. This was especially relevant when contextual information about the shooter was not available, such as the shooter’s name or description, or when information received was deemed unreliable by teachers. Moreover, given that the active assailant was a high-school student he could easily “pretend” to be a regular student, thereby gaining access to more victims by convincing a teacher to let them in the room or hide with others. One teacher said, “First, an unidentified student walked into my room and said, ‘I’m lost.’ When I was asking for their name, they ignored me. I was very nervous because I didn’t know who it was.” Another noted, “I saw a student with a brown shirt trying to get into [room] 200. The way the student ran at that room door made me suspect him as the shooter, so I closed my door really fast.”

Information Transfer

Information transfer refers to the teacher communicating information to others and the teacher receiving information from others. These communications directly impacted teacher decision-making, including when they decided to deviate from protocols. Teachers used this information when deciding when and where to hide. For example, one teacher stated, “Locked and closed door after looking down [the hallway] where shooter was reported to be.” Routine transmission of information allowed participants to avoid direct encounters with the shooter and helped them stay alive. One teacher recounted how she “ran down the stairs to my homeroom while announcing on the PA that there was a shooter and ushered a student in and closed the auto lock door.” This example demonstrates using information for decision-making and transmitting information to others.

Teachers often felt they lacked time to properly communicate information to the administrator and other teachers. One teacher gave an example stating, “I hid in [Room] 109 while I called in the shooter; I was shot mid-message.” Teachers were frustrated in these situations, as well as situations in which information was unclear. This frustration was discussed relative to confusion over transmitted information, with one teacher stating: “One of the students watched someone get shot outside from the back hall doors. I called it into admin but was told I’m mistaken, even though there was a body and the student watched it happen.”

Regarding misinformation, teachers would experience panic if communicated information indicated the active assailant’s location was nearby or unknown. One teacher recounted, “the fear hit me with the possibility that the shooter might’ve been outside my room was paralyzing.”

Finally, communicating while trying to stay safe was challenging for teachers. One teacher provided an example, “The shooter was shooting everyone, so I tried locking the door, but it was taking too long, and I attempted to make an announcement to the admin that [the] shooter was in Room 108, but I was killed.” Another teacher, referencing the need to make an announcement, said, “Admin didn’t make any announcements even though I radioed them twice...[which] caused more panic.”

Discussion

Three overarching themes, humanistic care, enacted care, and professional duty, capture how teachers in the current study experienced lockdowns and their role in response protocols. Humanistic care manifests as a sincere concern for the well-being and safety of all individuals, often leading teachers to take extraordinary measures, at times endangering their own lives, to safeguard others. Enacted care pertains to teachers' unwavering commitment to the adherence of safety protocols, thereby ensuring the welfare of all involved. Lastly, professional duty emphasizes teachers' pivotal role in ensuring the safety of the school and its student body. This duty entails an acute awareness of the prevailing circumstances, informed decision-making, and a commitment to upholding prescribed protocols and procedures, all geared towards safeguarding the school community at large. Collectively, these emergent themes underscore teachers' unwavering dedication to the well-being of others and their resolute commitment to ensuring the safety of students and school staff in the context of lockdown drills. This discussion underscores the importance of acknowledging teachers' emotional needs, engendering supportive school climates, and refining lockdown protocols to duly support teacher well-being and school safety.

Balancing Skill Acquisition and Teacher Wellbeing

Lockdown drills, while instrumental in preparing teachers for the exigencies of real-world situations, may have an emotional cost. This is a complex dilemma because, on one hand, lockdown drills may unduly expose teachers to emotionally distressing scenarios, especially within the purview of more realistic, options-based drills. On the other hand, having the opportunity to demonstrate applied knowledge of protocols – to include decision-making dexterity in extreme circumstances – is critical. Further, despite the burden of stress and adversity, teachers in this study were determined to ensure the safety of students and colleagues. This phenomenon is emblematic of emotional presence and an ethic of care, epitomizing teachers' commitment to the welfare of their students and the school community (Noddings, 2013). Intriguingly, aiding others was not merely a manifestation of teachers' commitment to care; it concurrently functioned as a coping mechanism, affording teachers a means of managing their internal stressors.

Lazarus (1981) postulates that an individual's approach to adversity bears more consequential import than the event itself. Approach-based coping asserts individuals employ problem-based strategies, what Roth and Cohen (1986) refer to as “turning toward” a stressor (p. 813), to manage adversity (Weinstein et al., 2009). At the core of all three themes, teachers consistently demonstrated a propensity for problem-focused coping by prioritizing the emotional well-being and safety of others through protocol adherence and enforcement, information sharing, and attending to the emotional needs of others. This approach-based coping mechanism appeared to serve as an effective response to teachers' own emotional duress.

Supportive Policies and Teacher Agency

The overarching observation across all three themes emphasizes teachers' adeptness at rapidly adapting, especially when situations demand deviations from established protocols. In this context, preserving teachers' agencies to make informed decisions, particularly when diverging from established procedures, becomes a pivotal concern. Supportive policies tailored to lockdown drills for educators serve a dual purpose: they facilitate effective drill execution while simultaneously addressing the emotional and psychological well-being of teachers,

thereby striking a crucial balance between preparedness and mental health. Empirical research lends robust support to the formulation of such supportive policies, confirming their role in enhancing teachers' confidence in implementing prescribed plans (Acton & Glasgow, 2015; Perkins, 2018). Moreover, existing literature suggests that systematically integrated approaches, where teachers actively contribute to protocol development, foster a heightened sense of policy supportiveness and bolster teachers' confidence in executing procedures (Schleicher, 2018).

Also imperative is acknowledgement that the responsibility for others placed upon teachers can exact an onerous toll. This study provides a unique contribution to the existing literature by underscoring the significance of teachers' sense of responsibility during school violence situations, specifically highlighting that this burden can either enhance or diminish well-being. Just as schools have appropriately given precedence to student safety and well-being when developing active shooter response protocols, there is an equally compelling need to extend this same consideration to teachers. Underscoring the need for policies that duly support autonomy and teacher well-being in the context of lockdown drills, it is essential to empower teachers through psychoeducation about potential experiences during lockdown drills, distress recognition, identification of appropriate coping strategies, and to ensure access to mental health professionals, both during and after drills.

Balancing Realism and Training

This study stresses the critical role of teacher training in lockdown drill protocols, emphasizing the need for swift decision-making in crisis situations. However, it also raises a cautionary flag against an unquestioning pursuit of hyper-realistic active shooter scenarios. The primary focus should be on cultivating knowledge and adaptability, not excessive attempts at realism. This study introduces a novel consideration of exposing teachers to simulated gunshot victims in the context of teachers' inherent responsibility to protect others from harm. Such exposure often triggers a potent stress response characterized by fear and associated behavioral reactions. While such exposure may enhance situational awareness regarding heightened threats, the necessity of subjecting teachers to extreme levels of threat during preparedness training warrants careful deliberation, particularly for educational institutions contemplating the adoption of more realistic, option-based lockdown drills.

To strike a balance, schools must provide teachers with training scenarios that effectively prepare them for high-stress situations while safeguarding their emotional well-being. This comprehensive training should encompass both the technical aspects of lockdown drills and the emotional and psychological dimensions of preparedness activities. For instance, effective communication is paramount to the professional duty theme, inferring that clear communication protocols should be an integral component of lockdown training. Educators should be equipped with the skills to convey information effectively to their colleagues and students, with a focus on how improved communication can mitigate stress and minimize confusion in an actual crisis. Once teachers possess the requisite skills and knowledge, the pursuit of extreme realism becomes less imperative. The key criterion shifts to teachers' capacity to fully understand lockdown protocols and make well-informed adaptations as necessary. Until further empirical evidence accumulates, it is recommended that schools adopt traditional lockdown drill protocols, as they appear to align more closely with teachers' emotional needs in the context of active shooter preparedness.

Supportive Leadership and Teacher-Student Relationships

Teachers who have supportive leaders and strong connections with their colleagues experience lower levels of stress and achieve greater success in their roles (Kraft & Falken, 2020). Creating an environment wherein teachers perceive themselves as valued, supported, and heard fosters a supportive milieu for teachers to effectively cope with stressors. The cultivation of robust teacher-student relationships further augments trust and compliance during crises. However, it is incumbent upon school leadership to equip teachers with the requisite support and training to navigate student compliance during lockdown drills. This can be accomplished by implementing clear protocols that ensure teachers and staff feel valued, supported, and heard, as advocated by Alexander and Harris (2020). Furthermore, administrators who prioritize the professional growth of teachers tend to have a more resilient teaching staff. Resilient teachers, empowered to respond effectively to stressful situations, are better equipped to cope with the challenges of highly variable and stressful circumstances in ways that promote their own well-being.

Policy Recommendations for Teacher Well-Being

Themes generated from this study should significantly influence the development and improvement of policies related to school safety and preparedness in the context of active shooter incidents. Policymakers need to broaden their focus beyond physical response protocols and consider the emotional aspects associated with lockdown procedures for educators. An integrated approach involves providing teachers with education about common emotional reactions during lockdown drills, offering mental health resources to help them process these emotions, and incorporating protective measures like clear communication protocols and a comprehensive understanding of policies and procedures. Additionally, the importance of ongoing training in active shooter preparedness cannot be underestimated. Teachers should understand that proficiency in this area goes beyond mechanical execution; it can enhance their emotional resilience.

It is also crucial for policies to acknowledge the emotional toll that option-based lockdown drills can take on teachers, emphasizing the need to prioritize their emotional well-being. This study calls for increased research into how teachers cope with trauma and stress in emergency scenarios, which could lead to more effective support systems and coping strategies for educators. Future research should explore the effects of different lockdown protocols on teachers' emotional responses, contributing to a deeper understanding of the relationship between lockdown procedures and teachers' emotional states.

Implications for School Administrators

School administrators must recognize and foster teacher agencies, creating an environment where educators are empowered to make decisions and play a central role in policy development. This aligns with the recommendations of Olive (2019) and Finley (2004), emphasizing teachers as key stakeholders in shaping emergency response procedures. Actively engaging teachers in the development of emergency communication protocols, for example, is a practical and advantageous way to achieve this goal. Engaging teachers as thought leaders not only facilitates the development of more effective emergency response plans but also enhances teacher responsiveness and effectiveness during crises (Ainsworth & Oldfield, 2019; Kim et al., 2021; Peist et al., 2020; Somech & Oplatka, 2009).

It is also imperative for school administrators to prioritize education regarding teachers' internal emotional experiences, particularly focusing on approach-based coping strategies (e.g.,

strategies to address fear, grief, or helplessness). This becomes especially crucial when teachers are faced with situations in which they may feel unable to fully protect their students. Such education has the potential to bolster teacher self-efficacy, individual mental well-being, and overall resilience when confronted with highly challenging circumstances. Importantly, this should be tailored to meet the specific needs of individual teachers within the school context, rather than adopting a one-size-fits-all approach. Tailored educational experiences can better equip teachers to respond with increased resilience should they encounter school violence in the future (Kraft & Falken, 2020; Lenzi et al., 2017; Perkins & Taylor, 1996).

Limitations and Future Research

This study had some notable limitations. First, the context was a VR simulated experiment. While simulation research parallels real situations, it is not an exact replica of real-world instances. Furthermore, due to the VR environment, participants did experience technical issues (e.g., system crashes or problems with VR controllers) that may have interfered with their perceptions of the experience in the scenario. These issues may have influenced reports of what happened during a particular scenario, thereby skewing reports of frustration or stress. Because participants were not directly asked to what extent VR fidelity or technical issues impacted their responses, future research should explore issues of fidelity and realism in similar immersive VR environments. Second, responses to open-ended questions were relatively brief and, due to the nature of the survey format, did not allow for follow-up question prompts. Our attempts to gather information following each scenario may have caused teachers to leave out pertinent information regarding their experience. Scenarios in which teachers experienced a high level of stimuli, such as seeing fatalities or hearing gunshots, yielded richer descriptions. While narrative accounts are naturally confined by the limits of introspection (see Johansson et al., 2006), there was saturation in this pattern across the dataset. Future investigations should consider features such as video playback interviews or additional response prompts to ensure that all pertinent data is collected.

It is possible an expanded recruitment effort with a more experienced and diverse sample may have yielded different results. The recruitment area for teachers was limited to one geographic region, specifically the northeastern part of the Commonwealth of Virginia. Moreover, the current sample was comprised of young (median age 27) teachers who were also relatively inexperienced (mean = 6.5 years teaching experience). Finally, the sample and researchers were not diverse in terms of racial or gender identity. It is strongly recommended that future studies include a more diverse sample and researcher team to better understand the impact of race and ethnicity on teacher experiences with lockdown drills.

Conclusion

This study expanded the literature on teachers' perceptions and experiences related to active shooter drills and fills a needed gap in current literature regarding teacher resilience in the wake of a traumatic event. However, more research is needed to fully understand how teachers may respond during an active shooter event. Future studies should expand on understanding teachers' perceptions around school violence simulations and if teachers in different contexts have varying experiences. Collectively, this work could result in adaptive, context-based solutions and practices for school-based active shooter response protocols. Future studies should also focus on different grade levels (primary vs. secondary teachers) and utilize a more demographically diverse sample. Lastly, mixed methods could provide an opportunity to understand the degrees of well-being, resilience, and stress as well as teacher perceptions to get a more holistic view of teachers' perceptions of school violence.

Lockdown drills can be emotionally stressful for everyone involved. Teachers play a crucial role in the execution of lockdown drills; therefore, lockdown drill procedures and response protocols should be curated by teachers' experiences. Teachers must be equipped with the necessary resources and practical protocols to respond with confidence and fidelity to protect the whole school community.

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