The Unacceptable Rise: An Investigation of School Shootings in the United States

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THE UNACCEPTABLE RISE: AN INVESTIGATION OF SCHOOL SHOOTINGS IN THE
UNITED STATES

by

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ABSTRACT

This research study examined teachers` understanding of risk factors and characteristics of potential perpetrators of school shootings, as well as the steps to take when they are identified in students. Participants completed a survey that contained Likert-type scale items regarding self-efficacy and open-ended questions regarding school violence experiences. A mixed methods analysis revealed three primary conclusions. First, teachers have high levels of self-efficacy regarding the importance of and ability to deal effectively with troubled students. This conclusion suggests that teachers do internalize the relevance of this issue to them. Second, this study revealed a gap in terms of the explanation and distribution component of the IDEA model. More specifically, teachers are under-informed about how to identify characteristics of potential perpetrators and what forces may influence them to engage in school violence. Third, this study revealed a need for additional modes through which training modules and sessions should be distributed to prepare teachers to dissuade violent acts from occurring in their classrooms and schools.

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CHAPTER ONE: INTRODUCTION

Few would argue that school shootings are a serious problem across the United States and need attention. Debate tends to arise, however, regarding why the problem is growing and how best to solve it. This chapter introduces some statistics illustrating the problem of school shootings followed by a rationale for studying both the reasons for the drastically increasing numbers and how to identify potential perpetrators. Finally, this chapter closes with an overview of the organization of this thesis.

Problem and Rationale

For nearly two decades now, the number of school shootings occurring in the United States has been on the rise. Tragically, since the Columbine High School massacre in April 1999, not only have these multi-victim shootings increased, but so have the number of perpetrators under the age of 16, the types of schools attacked, the number of lives taken, and the percentage of perpetrators who then commit suicide (Langman, 2016). In fact, the percentage of perpetrators who then commit suicide increased from 30.6% in 1999-2000 to 57.1% in 2004-2005 (Langman, 2016). More specifically, whereas the average number of school-associated homicides per incident in the U.S. was 11 in 2000, that number increased to 21 during the 2004-2005 school year (Logue, 2008). In other words, the number of deaths caused by school shootings has increased by nearly 100% between 2000 and 2005.

School violence in general—and school shootings in particular—are a serious concern for most Americans today. This concern is fueled by the belief that the number of school shootings and resulting deaths has grown exponentially in recent years. Based on a 50-year study of school

shootings, this assumption is supported by actual facts. To clarify, a study examining school shootings over the past 50 years reports that the average number of multi-victim shootings each year has increased from about 17 over the course of the first 25 years (1966-1991) to 45 (1991-2015) over the next 25 years (Langman, 2016). Moreover, whereas the number of school shootings has decreased in elementary schools, multi-victim shootings have increased by 33.7% and 65.5% respectively in colleges and universities (Langman, 2016).   Finally, although the average number of wounded victims has decreased from 6.6 to 5.1, the average number of victims killed has increased from 2.9 to 5.1 (Langman, 2016).

Add to these statistics the fact that, according to a study conducted by the Centers for Disease Control and Prevention (CDC), 4.1 percent of U.S. students reported having carried a weapon while on school property (Kann et al., 2015). *Everytown for Gun Safety* research began tracking gunfire incidents on school grounds (including colleges) in 2013. They found that approximately three million American children are exposed to shootings each year, 14,500 are actually shot and injured, and more than 2,700 are shot and killed (Everytown, 2018).

Data published to date shows that the 2017-2018 school year is the bloodiest school year on record with "the 1998-1999 school year ranking second, and the 2012-2013 (with the Sandy Hook Massacre) third" (Rubio, 2018, p. 2). Clearly, school shootings are a serious problem in the United States, a problem that has been growing exponentially since the 1999 Columbine massacre.

A state-by-state analysis of school shootings since Columbine in 1999 reveals that California has had the most so far with 28, followed by Florida with 17, and Texas with 14. This is particularly perplexing given the fact that, according to the National Center for Education

Statistics and the Bureau of Justice Statistics, students who reported carrying a weapon on school property within a 30-day time frame decreased from 12 percent to six percent between 1993 and 2009 and was even lower (4.1 percent) in 2015 (Kann et al., 2015). If significantly fewer students are bringing weapons onto school property, why have school shootings increased so dramatically since Columbine? This research project explores possible answers to this very question, as well as some proactive interventions that may at least begin to address the problem.

Although much is known about how many school shootings take place every year, much less is known about why perpetrators decide to kill innocent school children. Recent research, however, now identifies four main risk factors. These factors can be categorized as: individual risk factors, family risk factors, school/peers risk factors, and societal/ environmental risk factors (Dutton, White, & Fogarty, 2013). According to Flores De Apodaca and colleagues (2012), "the typical characteristics of shooters has been a male with a mean age of 16 years, who abused drugs and alcohol, was involved in an interpersonal dispute, and frequently, belonged to a street gang" (p. 365). Another review by Sommer, Leuschener, and Scheithauer (2014) reveals that perpetrators report "feelings of being let down by their families, adverse social and environmental conditions, and acute strain arising from various sources" (p. 4). Moreover, according to this same study, perpetrators perceive themselves as having been victims of verbal and physical bullying prior to the shooting. Although school shooters are often referred to as loners, they aren`t so much loners as they are "failed joiners who always tried to fit in" (p. 5).

Another major factor that may contribute to school shootings is school environment. Larger schools that are more crowded tend to exhibit higher levels of violence than smaller schools that are less crowded (Flores De Apodaca et al., 2012). Other factors within the school

environment include student behavior, school policy, and faculty and staff behavior. Relationships between the perpetrator and their adult victims is also an important element within the school environment. Perpetrators who felt that academic or disciplinary injustices had been inflicted upon them became shooters. In addition, "in some cases teachers and administrators had merely ignored or dismissed the bullying suffered by the future schoolyard assailant and had failed to intervene, while in others the teachers played a more active role, at least in the eyes of the perpetrators" (Sommer, Leuschner, & Scheithauer, 2014, p. 5). In sum, school shooters report doing so as an act of justifiable revenge for being mistreated.

Although these studies are encouraging in that they have begun to identify possible risk factors and characteristics of potential shooters, more needs to be done to determine whether there are additional risk factors and characteristics of potential shooters, how to identify them in students before an event takes place, and interventions to mitigate the possibility of a shooting before it occurs. Thus, this thesis proposes to extend research in ways that begins to address these gaps. More specifically, this thesis intends to measure teachers' understanding of risk factors and characteristics of potential perpetrators, as well as the steps to take when they are identified in students.

Organization

This thesis is organized into five chapters. This first chapter introduces the problem and rationale for the study and provides an organizational overview. Chapter two offers a review of literature related to school shootings and risk factors, as well as clarifies the theoretical framework on which the analysis is based. Chapter three describes the methods employed and

chapter four reports the results. Finally, chapter five offers conclusions, implications,

limitations, and suggestions for future research.

CHAPTER TWO: LITERATURE REVIEW

This chapter provides a review of related literature on which the research study is grounded. The chapter begins by providing an in-depth explanation of school shooting statistics, where they took place, and how they have increased since 1999. Next, risk factors that set a foundation for the reoccurring patterns in behaviors and relationships among perpetrators of school shootings are explored. Discussion of risk factors will lead to an analysis of school violence intervention and prevention strategies, and their instructional effectiveness. Finally, the IDEA model for effective instructional risk and crisis communication is offered as a theoretical basis for the project and, thus, helps to shape the research questions posed.

School Shootings

In 2001, Anderson et al. studied school-associated violent deaths in the United States that took place between 1994 and 1999 and discovered that 172 school-violence related deaths had occurred during this time frame. They further reported that 146 of them were homicides and 24 were suicides. In addition, 46 were female homicides and 100 male homicides, whereas 6 were female suicides and 18 male suicides. Most of these deaths (N=129) took place in high schools and, of them, 108 were homicides and 8 were suicides. The second largest number of violent school deaths occurred in middle school/ junior high schools, with a total of 26 (23 homicides and three suicides). Lastly, the fewest occurred in elementary schools, with a total of 14 (13 homicides and one suicide).

While student violent event death rates decreased between 1994 and 1999, total student homicides (both single homicides and multiple homicides) increased between 1994 and 1999.

The data also reflected the total number of deaths, homicides, and suicides within particular areas on school campuses. Within this time frame, 11 deaths occurred in classrooms, 13 in hallways, eight in restrooms, 16 in other indoor locations, 38 in parking areas, 24 in sporting fields/ playgrounds, and 37 in other outdoor locations. These events typically occur during lunch or between-class periods and using guns.

Interesting to note here is the fact that, in the aftermath of the Sandy Hook Elementary School shooting in 2012, firearm sales increased significantly along with searches on Google for how to buy and clean them (Levine & McKnight, 2018). Levine and McKnight (2018) conducted a study focused on whether there was a spike in accidental firearm deaths in conjunction with the greater exposure to firearms. They discovered that the spike in number of children`s deaths after the Sandy Hook Elementary School shooting massacre "was, indeed, concentrated in those states with larger increases in per capita gun sales" (p. 4).

Risk Factors

All too often, news reports reveal that a school shooter's motive is linked at least in part to having been bullied by peers. Although these claims are often relevant, what remains unclear is the specific form of bullying experienced by the perpetrators. Klein (2006) studied correlations between bullying and school shootings, particularly bullying due to one`s sexuality. She discovered that "the perpetrators in many of these shootings said they had been provoked by "preps and jocks" who called them gay or who otherwise implied they were homosexual" (p. 40). In her analysis, Klein explains that normalized masculinity—which is essentially the high expectation for boys to portray violence, dominance, and aggression in order to obtain status in a

masculinity hierarchy—may also be at the root of school violence. To clarify, normalized masculinity is a social norm suggesting that the behavior of those making fun of another`s sexuality is no big deal. In other words, implying that a classmate is a "fag," "sissy," or "homo," is brushed off based on the cultural norm that "boys will be boys."

Peterson and Silver (2017) conducted a study focused on fostering empathy among victims toward violent offenders in order to understand them. They conclude that "the more similar a person is to a perpetrator of a crime and the more empathy felt, the more lenient he or she is likely to be in assigning blame and responsibility for the criminal act" (p. 402). However, connecting to Klein`s explanation of the concept of normalized masculinity, Peterson and Silver propose something they call "the black sheep effect." This effect can have the opposite impact when it comes to empathy, in that "if people see themselves as similar to a perpetrator who has done something violent, they may feel more anger toward that person to protect their positive self- or group image" (p. 402).

According to Verderber, Sellnow, and Verderber (2015), "interpersonal relationships are defined by the sets of expectations two people have for each other based on their previous interactions" (p. 122). Research shows that the influence of student-teacher relationships on student learning is both direct and indirect (Frymier & Houser, 2009). Furthermore, there may be both positive and negative effects on student satisfaction with regard to student-teacher relationships. When teachers appear to be concerned about their students, student satisfaction increases. When teachers are perceived as authoritarian, student satisfaction decreases (Goodland, 1984). Griffin (2006) points out that "a constitutive approach to communication asks how communication defines or constructs the social world, including ourselves and our personal

relationships" (p. 167). This approach to relationships implies that communication builds and sustains the relationship. In order to uphold communication in student-teacher relationships, immediacy is vital. Immediacy can be communicated through both verbal and nonverbal behaviors and is found to have positive impacts on student learning and motivation (Frymier & Houser, 2009).

Children with behavior problems are at a high risk for poor success outcomes in schools. Baker, Grant, and Morlock (2008) argue that "having a relationship with a teacher characterized by warmth, trust, and low degrees of conflict is associated with positive school outcomes" (p. 3). Social-emotional and behavior problems among school aged children has become quite common within schools. These behavior problems are categorized as internalizing and externalizing. Internalizing behavior problems are portrayed with anxious and depressive-like symptoms, where externalizing behavior problems are portrayed with impulsive, aggressive, or overactive behaviors (Baker, Grant, & Morlock, 2008). "In the first several years of school, children who exhibit behavior problems transition poorly to school and perform worse on academic, social, and interpersonal indicators of school adjustment than their peers without behavioral difficulties" (Baker, Grant, & Morlock, 2008, pp. 3-4). These children are at high risk for criminality, poor adult adaptation, and school dropout.

Positive student-teacher relationships on the other hand motivate students to fully engage in learning activities and foster behavioral, social, and self-regulatory competencies needed in school. Children with externalizing behavioral problems have poorer quality of student-teacher relationships than children with internalizing behavioral problems. Not much research has been done about student-teacher relationships with regard to children with internalizing behavioral

problems. However, children with externalizing behavioral problems have "more negative interactions with teachers than other children" (Baker, Grant, & Morlock, 2008, p. 4). In addition, research supports that children with early behavioral issues are at a higher risk for relational negativity with teachers signaling self-regulatory and social-emotional difficulties that predict later school problems (Baker, Grant, & Morlock, 2008).

Researchers have used the term *difficult* temperament to describe children whose behaviors are characterized by withdrawal from novel stimuli, irritability, negative mood, distractibility, low adaptability to change, intense reactions to stimuli, and poor attention and persistence. "There is a considerable overlap in this construct with attention deficit disorders. A difficult temperament has been found to be associated with behavioral problems and aggression in young children and adolescents" (Kingston & Prior, 1995, p. 8). Many studies have looked at the relationship between psychopathy and violent behavior, and it appears to be associated with instrumental violence. Instrumental violence tends to be more dishonest and manipulative, rather than impulsive. Offenders, often those in school shootings, are considered "reactive offenders" and have not scored higher on measures of psychopathy.

Common themes among perpetrators in school shootings tend to have poor coping and social skills, display low school commitment/achievement, exhibit antisocial peer group, and be socially isolated (Verlinden, Hersen, & Thomas, 2000). Research has shown that violent boys display more extreme social-cognitive conditions than boys who are moderately aggressive. Early patterns of aggressive behaviors within youth, has the highest predictive value for violent behavior. Social relationships with peers, commitment and bond with school, and academic failure all predict violence later in life. Verlinden, Hersen, and Thomas (2000) report that

"schools are highly vulnerable to interpersonal violence" (p. 13). Research also points to school

policies as highly influencing school violence. Aggressive behavior among boys is also

influenced by the classroom environment, where those who have a strong teacher who provides

clear expectations for appropriate behavior and maintains order, show less aggression later in

life. On the other hand, a classroom environment where there is a chaotic environment and weak

teacher, show more aggression later on and tend to join or form more antisocial groups.

<p style="text-align:center;">Interventions</p>

School crisis interventions are critical to address problems that are unique to the school

setting. Brock and Jimerson (2004) clarify that interventions are needed to "prevent and/or

mitigate common stress reactions, identify those who might develop psychopathology (e.g., post-

traumatic stress disorder, depression), prevent and/or mitigate dangerous coping behaviors (e.g.,

suicidal and homicidal behaviors), and provide appropriate referrals to mental health

professionals" (p. 285). During the last twenty-five years, there have been several approaches to

school violence prevention and interventions. According to Miller and Kraus (2008), "results of

the most effective models for violence-prevention programs utilize social skills training" (p. 21).

These programs also focus on family interaction, parent training, and family dynamics. In

addition, teacher-student relationships, as well as healthy interactions with peers in the school

environment, is a vital component. Self-control, emotional literacy, positive peer relations,

social competence, and interpersonal problem solving are critical components to social skills

training (Miller et al., 2008).

School violence prevention models that focus on psycho-educational strategies, counseling and supportive services to youth who have been exposed to violence, and hybrid programs that combine two or more approaches, have been shown to be effective violence-prevention strategies. The National School Safety Center (2007) proposes several actions for reducing school violence events:

> Acknowledge the student`s problem immediately and seek help from local or mental health care professionals, police, and community resources; educate all school personnel about risk factors for both individuals and groups; establish an informed communication network with students; institute a strict visitor/trespassers policy in the schools; monitor and control points of access to the school; work closely with local police and establish procedures to share information with them. (p. 22)

School personnel must be alert to watch for risk factors that may result in violent behaviors. The National School Safety Center offers a checklist compiled from "tracking school-associated violent deaths in the United States" (Miller et al., 2008, p. 356). This checklist was created by studying common characteristics of youth who have caused these deaths and identifies behaviors which could possibly signify a youth`s potential for harming himself/herself or others. Identified behaviors include, but are not limited to, "characteristically resorts to name calling, cursing, or abusive language, habitually makes violent threats when angry, has previously brought a weapon to school, is on the fringe of his/her peer group with few or no close friends, has little or no supervision and support from parents or a caring adult, and has been bullied and/or bullies or intimidates peers or younger children" (Miller et al., 2008, pp. 356-357).

These behaviors should alert teachers, administrators, and support staff to address the needs of the troubled students.

A plethora of school violence research has been conducted suggesting that interventions need to be implemented in order to make school environments safer. In addition, studies have been done to test the effectiveness of these interventions. However, many of these studies are not recent, despite the spike in school shootings. In 1998, a study was conducted by Lewis, Sugai, and Colvin that explored the impact of a social skill instruction program that merged direct intervention on problem behavior in the cafeteria, at recess, and during hallway transitions. Results showed that implementing social skill instruction across the three settings was relatively effective in reducing the overall number of problem behaviors in each setting. However, Lewis and colleagues (1998) conclude "although the results indicate that educators can reduce problem behavior through proactive means, the actual long-term effects of the intervention on reducing the prevalence and incident of antisocial behavior patterns are unknown" (p. 456).

In a more recent study, Newman- Carlson and Horne (2004) examined the effectiveness of a bully prevention program that counselors might use to update teachers` knowledge and use of bullying intervention skills, students` classroom bullying behaviors, and teachers` self-efficacy. Participants in this study (sixth, seventh, and eighth grade middle school teachers in a public school in a Southwestern United States school district), attended three training sessions and participated on a support team. According to Newman-Carlson and Horne (2004), "the contents of the program included information pertaining to bullying and victimization, recommended interventions, prevention strategies, stress-management techniques, as well as classroom activities" (p. 261). Findings suggest that the program effectively increased teachers`

knowledge and use of intervention skills, decreased students` classroom bullying behaviors (measured by disciplinary referrals), and increased teachers` self-efficacy.

Theoretical Grounding: The IDEA Model

The IDEA (internalization, distribution, explanation, action) model proposed by Sellnow and Sellnow (2013, 2014, 2019) is "a learning theory-based model, its utility can be measured using affective (perceived value, relevance), cognitive (comprehension, understanding, efficacy), and behavioral (actions) learning outcomes" (Sellnow, Lane, Sellnow, & Littlefield, 2017, p. 555). Research has shown that this can be applied across communication contexts (e.g., health, risk/crisis, business, forensics) (Sellnow et al., 2017). The current study focuses on potential shooter attribute identification and interventions among teachers using the IDEA model as its driving force.

The IDEA model was developed specifically as an outgrowth of Dewey`s (1938) experiential learning theory and Kolb`s (1984) cycle of learning, both of them designed as means for understanding effective instructional strategies in traditional classroom settings. The IDEA model transforms these constructs to provide a means to predict and explain instructional effectiveness in risk and crisis communication settings. Thus, it presents itself as an appropriate theoretical framework for this thesis project.

The IDEA model has been tested and results published in a number of journals and focused on a variety of risk and crisis situations (e.g., Sellnow, Johannson, Sellnow, & Lane, 2018; Sellnow, Sellnow, Helsel, Martin, & Parker, 2018; Sellnow-Richmond, George, & Sellnow, 2018; Sellnow et al., 2017; Sellnow et al., 2014; Littlefield et al., 2014). For example,

Sellnow, Lane, Sellnow, and Littlefield (2017) conducted a posttest only quasi-experimental cross-sectional research experiment that "measured the perceived message effectiveness, cognitive understanding, and behavioral intentions of those viewing a television news story about a crisis situation employing the IDEA model compared to those viewing a similar story replicating typical crisis event news stories delivered to general publics" (pp. 552-553). Results revealed that, the news story designed using the IDEA model was substantially more effective than the typical risk/crisis news stories provided to the general publics. The IDEA model message was also more effective, resulting in "greater behavioral intentions to engage in appropriate self-protective behaviors in the event of an acute risk or crisis situation" (p. 563).

An additional study conducted by Sellnow-Richmond, George, and Sellnow (2018) examined the instructional risk messages presented after the 2014 death of Liberian national Thomas Eric Duncan in Dallas, Texas from Ebola. The study applies the IDEA model to examine instructional risk and crisis communication message offered locally, nationally, and internationally. Messages from Dallas news stories and press releases were studied locally, Centers for Disease Control and Prevention Live Chat Twitter posts were studied nationally, and website content from the World Health Organization, the United Nations Children`s Fund, and Doctors Without Borders were studied internationally. Conclusions illustrate that the mass of messages offered from each of the organizations "privileged the element of explanation over internalization and action as well as negative over positive exemplification" (p. 135).

In essence, IDEA is an easy-to-remember acronym for each element that is to be addressed in an effective instructional risk or crisis message (e.g., Sellnow & Sellnow, 2019; Sellnow & Sellnow, 2014). The I stands for internalization. Such messages need to demonstrate

compassion, "highlight personal impact, clarify proximity, indicate timeliness, and use exemplars" (Sellnow & Sellnow, 2019, p. 69). Until people know how much you care, they themselves will not care about what and how much you know. The D stands for distribution, where the focus is on how and through what communication channels these messages are sent. Main challenges faced during the distribution stage include getting messages to disparate publics with limited access to the channels delivering the information, and consistency/ coordination among the various agencies delivering the messages (Sellnow & Sellnow, 2019). Multiple channels should be considered for the dispersion of risk and crisis messages because people seek information via a variety of outlets.

The E stands for explanation, which focuses on providing answers to the "what" and "why" questions that arise during crisis events. Spokesperson credibility and ongoing communication is a big factor during this stage of a risk and crisis situation. It is important for messages to take into account the varying literacy levels among individuals and communities, however, it is also a challenge. The final stage of the IDEA model is the A: Action. Sellnow and Sellnow (2019) explain that "the action component of the IDEA model focuses specifically on what people should/ can do or not do for their own safety and well-being, as well as those they care about" (p. 74). This should also focus on the things people should and should not do before, during, and after a crisis situation, as well as when using exemplars and across geographical boundaries. Action steps need to be provided for both individuals living in the crisis areas, as well as outside of the crisis areas. Having this information helps to prevent excessive injuries and traumatic situations because individuals have a guide for staying out of harm's way.

Although the IDEA model has demonstrated its utility in a number of different risk and crisis situations, it has not been applied directly to the issue of school shootings generally or assessment of teacher understanding and self-efficacy specifically. Thus, this thesis project contributes to research and theory by extending the model in these ways.

<u>Research Questions</u>

School shootings are arguably an epidemic in the U.S. today. Data from multiple sources reveal that the problem is not going away and appears to be rising exponentially. Recent research based on data collected from shooters post-event is beginning to shed light on characteristics that seem to be generalizable across them. What is not known yet, however, is the degree to which teachers are able to (a) identify such characteristics in potential perpetrators before a shooting occurs and (b) provide appropriate support and/or instruction to address issues and, as a result, save lives. Thus, this thesis seeks to answer the following research questions:

RQ1: To what degree do teachers perceive personal disciplinary self-efficacy

a.) in the classroom and

b.) in their ability to identify attributes and behaviors of potential shooters?

RQ2: To what degree do teachers perceive personal instructional self-efficacy, efficacy to create a positive school environment, and efficacy to influence decision-making

a.) in the classroom and

b.) in their ability to address problematic attributes and behaviors of potential shooters?

CHAPTER THREE: METHODS

This chapter explains the methodological framework for this thesis project. More specifically, this chapter identifies the participants, data collection process, survey instruments, and data analysis procedures.

Participants

A total of 325 surveys were received. After removing incomplete surveys, the data set consisted of 234 usable surveys. More specifically, the sample consisted of twenty-two percent of the K-12 teachers currently employed in Orange County Public Schools (OCPS) in the Greater Orlando area. Participants were current teachers in the classroom. Of the 234 participants, 35 indicated their biological sex as male, 195 as females, one as "other sex", and three did not respond to the item. Of these participants, 209 reported their ages ($M = 44.53$, $SD = 12.02$), ranging from 21 to 69 years old, with 25 choosing not to respond to the item. Most participants identified themselves as Caucasian (70.2 %, $n = 165$), followed by African American (11.5 %, $n = 27$), Hispanic (8.9 %, $n = 21$), Other Races (5.1 %, $n = 12$), and Asian (1.3 %, $n = 3$). Of the 234 participants, 94 participants (40.0 %) identified themselves as Democrat, 67 (28.5 %) as Independent, 54 (23.0 %) as Republican, and 18 (7.7 %) chose not to respond to the item. Moreover, of the total 234 participants, 227 reported their years of teaching experience. Of the 227 participants, 95 (41.3 %) reported having between one and 10 years of teaching experience, 74 (32.2%) as having 11-20 years teaching experience, 43 (18.7 %) as having 21-20 years of teaching experience, and 15 (6.5 %) as having 31 or more years of teaching experience.

In addition, participants reported the grade levels they have taught. From the sample of 234 participants, 228 reported the grade levels they have taught. Of the 228 participants, 77 (48.7%) reported teaching elementary school (grades K-5), 34 (26.7%) reported teaching middle school (grades 6-8), 23 (18.9%) reported teaching high school, and 94 (40.9%) reported teaching multiple grade levels.

<p style="text-align:center">Procedures</p>

Once IRB approval was attained (see Appendix A), participants were recruited for the study via OCPS email addresses, provided to the public through the district`s school directory website. Once participants accessed the online survey through Qualtrics.com and provided consent to participate, individuals were asked to answer a set of survey items. Participant information will be kept anonymous, unless participants indicated they are willing to participate in a follow up interview if warranted based on results of data collected via the survey. If participants indicated their willingness to participate in a follow up interview, they provided contact information.

<p style="text-align:center">Instrument</p>

Survey Questionnaire. The instrument (see Appendix B) was comprised of 45 Likert-type scale questions ranging from one (nothing) to nine (a great deal), five open-ended questions regarding a teacher`s ability to identify and address problematic attributes and behaviors of potential shooters, and six demographic questions. The survey questionnaire was drawn from Bandura`s Teacher Self-Efficacy Scale (1997). Questions were modified to focus on teacher self-efficacy in the classroom generally, as well as on identifying attributes and behaviors of potential

shooters specifically. Internal consistency of Bandura`s original scale was measured using

Cronbach`s Alpha and yielded results of .70 for efficacy to influence decision making, .79 for

instructional self-efficacy, .76 for disciplinary self-efficacy, .73 for efficacy to enlist parental

involvement, and .70 for efficacy to create a positive school climate. Among the six subscales,

the correlations were moderate ranging from .33 to .54, and "all dimensions of teacher self-

efficacy were positively related to perceived collective efficacy. The correlations ranged from

.29 to .46" (Skaalvik & Skaalvik, 2007, p. 616). Participants indicated their opinions about each

statement by clicking on the appropriate number, responded to five open-ended questions, and

will answered six demographics questions.

Analysis

A mixed methods analysis was conducted. The survey responses were examined to

discover different areas of teachers` perceived self-efficacy both in the classroom and in their

ability to identify and address attributes and behaviors of potential shooters. More specifically,

scores on the Likert-type scale questions were analyzed using a series of t-tests, one-way

ANOVAs, and correlations to glean understanding about the degree to which teachers perceive

personal disciplinary self-efficacy, personal instructional self-efficacy, personal efficacy to

create a positive school environment, and personal efficacy to influence decision making in the

classroom generally, and regarding attributes and behaviors of potential shooters specifically.

The open-ended responses were examined using a thematic analysis to identify emergent themes

about teacher experience with school shootings, their perceived ability to identify risk factors and

characteristics of potential shooters, and what to do once these risk factors and characteristics

have been identified.

CHAPTER FOUR: RESULTS

This chapter reports the results of the analysis of survey questionnaire data regarding the degree to which teachers perceive personal disciplinary self-efficacy, personal instructional self-efficacy, personal efficacy to create a positive school environment, and personal self-efficacy to influence decision making both in the classroom and in their ability to identify and address problematic attributes and behaviors of potential shooters. First, results from the quantitative analyses are offered followed by an account of the themes that emerged from the qualitative examination of responses to the open-ended questions.

Quantitative Analysis

To answer the first research question concerning teachers' personal perception of disciplinary self-efficacy, the disciplinary self-efficacy scale from Bandura (1997) was used. Mean scores for this scale indicate that teachers from the sample perceived disciplinary self-efficacy ($M= 7.53$, $SD= .85$). The second part of the research question inquired about teachers` perceived ability to identify attributes and behaviors of potential shooters. This was measured through a thematic analysis of responses to the open-ended question asking participants to describe what (if any) training they have had about how to identify risk factors and characteristics of potential shooters.

Post Hoc Analysis. To further analyze this question, disciplinary self-efficacy was measured with specific demographic characteristics. First, a t-test was conducted examining the difference between biological sex and perceived disciplinary self-efficacy. Results of the t-test indicate that women ($M =7.57$, $SD = .81$) perceived higher levels of disciplinary self-efficacy

than men ($M = 7.32$, $SD = 1.05$), $t(217) = 1.51$, $p = .019$. Because of the large differences between male and female groups, a Wilcoxon Mann-Whitney test ($U=2666.0$, $p= .222$) was conducted and indicated no significant differences between the groups. Another question asked participant political affiliation with the options of Republican, Democrat or Independent. A one-way ANOVA indicated no differences based on political affiliation $F(2, 203) = .155$, $p = .856$. A final post hoc question examined the relationship between the years of teaching and disciplinary self-efficacy. A correlation indicates that there is little, if any, relationship between the years of teaching and a teacher`s disciplinary self-efficacy ($r= .012$).

To answer the second research question, concerning teachers' personal perception of instructional self-efficacy, efficacy to create a positive school environment, and efficacy to influence decision making, scales from Bandura (1997) were used. Mean scores for the instructional self-efficacy scale indicate that teachers in the sample perceived they have high instructional self-efficacy ($M= 6.38$, $SD= .92$). In addition, mean scores for the efficacy to create a positive school environment scale ($M= 7.09$, $SD= .93$) and mean scores from the efficacy to influence decision making scale ($M= 5.76$, $SD= 1.36$), indicate that teachers in the sample perceived they have high self- efficacy with regard to creating a positive school environment and to influence decision making.

Post Hoc Analysis. To further analyze this question, instructional self-efficacy, efficacy to create a positive school environment, and efficacy to influence decision making were measured with specific demographic characteristics. First, a t-test was conducted examining the difference between biological sex and perceived instructional self-efficacy, biological sex and perceived efficacy to create a positive school environment, and biological sex and efficacy to

influence decision making. Results of the t-test indicate that women (M =6.43, SD = .86) perceived higher levels of instructional self-efficacy than men (M = 6.13, SD = 1.14), t (218) = 1.77, p =.032. Because of the difference between groups, a Wilcoxon Mann-Whitney test (U= 2520, p= .072) was conducted results indicate no differences between the groups. Results of the second t-test indicate that women (M = 7.13, SD = .89) perceived higher levels of efficacy to create a positive school environment than men (M = 6.91, SD = 1.11), t (219) = 1.24, p=.010. Because of the difference between groups, a Wilcoxon Mann-Whitney test (U= 2810, p= .324) was conducted results indicate no differences between the groups. Results of the final t-test indicate that women (M = 5.80, SD = 1.27) perceived higher levels of efficacy to influence decision making than men (M = 5.58, SD = 1.78), t (222) = .883, p = .046.

Further analysis investigated participants` political affiliation with the options of Republican, Democrat or Independent. A one-way ANOVA indicated no differences based on political affiliation regarding instructional self-efficacy F (2, 203) = .030, p = .971, as well as no differences between political affiliation regarding efficacy to influence decision making F (2, 206) = .268, p = .765, and efficacy to create a positive school environment F (2, 203) = 2.0, p =.138.

A final question examined the relationship between the years of teaching and instructional self-efficacy, years of teaching and efficacy to create a positive school environment, and years of teaching and efficacy to influence decision making. A correlation indicates that there is no significant relationship between the years of teaching and a teacher`s instructional self-efficacy ($r$= .040), between the years of teaching and a teacher`s efficacy to create a positive

school environment ($r = .012$), and between the years of teaching and a teacher`s efficacy to influence decision making ($r = .055$).

Qualitative Analysis

The second part of each research question inquired about teachers` perceived ability to address problematic attributes and behaviors of potential shooters. Responses by the 234 teachers who completed the survey questionnaire were examined through a thematic analysis open-ended question response asking participants (a) to explain what they believe to be the primary reason(s) school shootings take place and continue to rise, (b) to describe what (if any) training they have had about what to do in the case of an active shooter, (c) to describe what (if any) training they have had to learn what to do when one identifies a student that exhibits any of the risk factor characteristics or behaviors.

In total, 1,134 open-ended question responses were coded in the combined analysis of all five questions. Moreover, nearly every participant (N= 234) responded to each of the five questions (see Table 1). The thematic analysis of the open-ended responses suggests most participants have not been directly involved with a school shooting and believe that the primary cause of school shootings is due to the lack of mental health services for students, the effect of society (social media, tv, video games) on students, and the increased accessibility to firearms. In addition, the thematic analysis suggests most participants believe they have not received sufficient active shooter training, training to identify risk factors and characteristics of potential shooters, or training in the steps to take once risk factors and characteristics of potential shooters have been identified.

Table 1: Overall Themes from Open-Ended Questions

Theme	N
School Shooting Experience	226
Primary Causes of School Shootings	230
Active Shooter Training	226
Training to Identify Risk Factors and Characteristics of Potential School Shooters	226
Training for Steps to take when Risk Factors and Characteristics of Potential School Shooters have been Identified	
Total	**1134**

School Shootings

The first open-ended question focused on experiences participants have had regarding school shootings, yielded a total of 226 responses. The thematic analysis of these responses produced three main themes. These themes focused on participants not experiencing a school shooting, experiencing another act of school violence, or directly experiencing a school shooting (see Table 2).

No School Shooting Experience. In total, 214 (90%) of the 226 responses coded in this theme reported having not experienced a school shooting. Many participants, however, expressed their relief that this is the case. For example, Participant CF stated "no, thank heaven!" and Participant DH stated "no, thankfully!" Participant EL took their personal feelings

into account, stating "No, but I feel vulnerable every day." As is reflected in these statements, most respondents do not have any experience with school shootings.

Other forms of School Violence. Participants (*n*= 9) explained that while they have never experienced a school shooting, they have experienced other forms of school violence. Participant S stated "No, I have not experienced a school shooting. I have been at schools that went under full lockdown for other matters though." Participants noted that they have dealt with students having weapons in their classroom. Participant AE stated "I have never experienced a school shooting. I have experienced a student with a knife in my classroom and a student suspected of having a gun in class." In addition, Participant AH explains their experience and how it made them feel:

> I have never experienced a school shooting. I have, however, removed a gun from a
> student. The student brought the gun to school to use as protection. He felt he was being
> bullied. The student was removed from our school and taken away to jail. It was a very
> sad day for me because I knew that young man was placed into the "system" due to some
> failure of ours as a society, and a school system.

Overall, most teachers participating in this study had not experienced a school shooting; however, a few reported experiencing other forms of school violence.

Directly Experienced a School Shooting. Participants (n= 3) explained that they have directly experienced a school shooting. Participant DC indicated:

> Yes. When I was a junior in high school. A student who had been bullied by another
> student and was trying to prevent him from bullying his girlfriend, came into the cafeteria
> where students were spread out taking a test. He shot the bully multiple times and ran

away with the gun. The boy who got shot, survived, barely. I was in class with the girl the dispute was over. The teacher was in the hallway relaying rumors to us and told us what happened, and the girl fainted. The shots sounded like someone knocking over a metal trash can and I still startle when I hear that noise. They released us to walk/ drive home as usual, not knowing where the shooter was. The home ec class cleaned up the blood. The shooter was the son of my mom`s best friend and I had played board games with him in his basement after dinner once.  I didn`t know him very well, but he seemed like a nice kid. He`s in leadership in prison ministry now that he is out of jail. The kid who was shot, was later arrested for assorted violent felonies and was in prison the last I heard. I knew him as one of the punk thugs who hung out smoking in the parking lot (which was allowed back then). This was a small Midwestern town.

Table 2: School Shooting Experience (n=226)

Experience	Illustrative Examples
No School Shooting Experience	
Participant AG	"Not personally, just what I`ve witnessed in the news."
Participant CP	"No, I do not have any experiences."
Participant DA	"I have not experienced a school shooting."
Experience with Other Forms of School Violence	
Participant DL	"I have not experienced a school shooting, but I have survived a mass shooting at my previous place of employment: Pulse Nightclub."
Participant DZ	"No, I have not experienced a school shooting. However, I have experienced

Experience	Illustrative Examples
	several hours of lock down with severe ASD students."
Participant EL	"No, however we have had lockdowns for threats of weapons reported on campus."
Participant ER	"I have not experienced a school shooting, but I have had to remove a knife from a distressed student in my classroom."
Directly Experienced a School Shooting	
Participant DR	"I was in Calculus at Virginia Tech during the 2007 shooting that killed 32 students. My professor was given a message in the middle of class that said there had been a shooting in one of the dorms, she told us about it. She said I can't hold you here so it's your decision if you want to stay or go. I texted my sister who also had morning classes asking where she was. I didn't get an answer. We waited for a little bit but then decided to leave. As soon as we got out of the building (right next to Norris where the next shooting was occurring) we heard gun shots. Cadets yelled for us to get down. I didn't know what was happening, so I just started running in the other direction back to my dorm. As I ran a voice came on outdoor loud speakers blared to "seek cover there was a gunman on the loose. I continued to run. I reached my dorm and climbed the four flights of stairs to my room. I frantically tried to call my sister. She finally responded. She said she was okay and that the bus that had taken her to campus had been rerouted and was taking them back off campus to her townhouse. She stayed at her townhouse until evening. I stayed at my dorm until evening. We tried to reach my mom and dad to tell them we were okay before the news went live but phone lines were jammed. We finally reached my dad. When I walked outside my dorm in the evening to get into my sisters' car there were state troopers every few

Experience	Illustrative Examples
	feet. All these red dots appeared on my stomach the next day. I didn't sleep for more than a few hours at a time for several days. Nightmares would wake me up. I was a freshman in college this was my first year away from home. I was lucky. I felt very guilty for being able to walk away and to have my sister alive with me. My roommate lost a friend in the shooting and our dorm lost a cadet. The experience will never leave me. I have learned to stay present and logical reflecting on this experience. It deeply saddens me that there is a growing body of people who have experiences usually much worse than mine-where their everyday life erupts into sudden life or death decisions."
Participant EO	"Yes, as a student. When I was in 7th grade, a student who had dropped out previously came back to the school with a gun. He was looking for a teacher, but the teacher had previously retired. He shot in the air and then gathered fearful students in a classroom as hostages. Our principal convinced the shooter to release the students in exchange for him. There were only two injuries that day but several of the students who were held hostage are still dealing with PTSD almost thirty years later."

Primary Cause of School Shootings

The second question asked respondents about what they believe are the primary reason(s) school shootings take place and continue to rise. In total, this question yielded 230 responses. In other words, nearly every participant (N= 234) answered the question. The thematic analysis of these responses yielded three main themes. These themes focused on the lack of mental health

services for students (*n*= 134, 58%), the effect of society (social media, tv, video games) on students (*n*=55, 24%), and the increased accessibility to firearms (*n*= 41, 18%) (see Table 3).

Lack of Mental Health Services. Participants (*n*= 134) indicated that they believe the primary reason(s) for school shootings take place and continue to rise is due to the lack of mental health services offered to students. Participant O stated:

> I believe that the primary reason school shootings continue to take place and rise in number is that no one is intervening when it`s apparent that a student is in distress. There are a lot of individuals who look the other way when one student harasses another; it`s often suggested that because it`s a "joke" for the person making the statements, it has no impact upon the other individual. This is not a reality for these students. In response to the behavior, students who seem to have little interest in retaliating begin to internalize their anger; eventually they reach a point where they reach out for help from others, usually an adult. When the need for reassurance and comfort isn't met and their concerns aren't properly dealt with, they begin to feel disconnected from their school experience; school is no longer a safe place for them, so they respond by becoming a threat to others.

Along the same sentiments, Participant R reported "I believe children feel anxious, depressed, isolated, and unsupported.

The Effect of Society. Participants (*n*= 55) specified that they believe the primary reason(s) school shootings take place and continue to rise is the effect society (social media, TV, and video games) has on students. For example, Participant AE stated, "Violence is in everything kids are exposed to no: video games, TV, movies, and news." In addition, Participant AQ stated "Media portrays violence as commonplace, which desensitizes children to it."

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Accessibility to Firearms. Participants (*n*= 41) expressed that they believe the primary

reason(s) school shootings take place and continue to rise is the increased accessibility to

firearms. Participant AU stated, "There is a lack of effective gun control in the United States."

Similarly, Participant AZ, expressed it this way: "The sale of automatic weapons to people who

have been pre-identified as having emotional problems should be against the law."

Table 3: Primary Cause of School Shootings (n=230)

Theme	Illustrative Examples
Lack of Mental Health Services	
Participant X	"Lack of mental health counseling and identifying students who display/ have characteristic traits of potential shooters (ex; being bullied, withdrawn students, etc.)."
Participant AF	"As a country, we do not take seriously the issue of mental health. I believe people take drastic measures such as shooting people at a school for attention or to act out on the lack of attention they received as a child/young adult. We need more resources for addressing our mental health crisis- identifying students with mental health issues earlier and getting them, whatever help they need."
Participant AH	"The rise in my opinion is based on student`s inability to process, discuss, and effectively cope with pressure in and on mental health."
Participant AQ	"I believe children feel anxious, depressed, isolated, and unsupported."
Effect of Society (video games, social media, news, etc.	
Participant Q	"Students are exposed to too many factors in their environment that are not productive, and they don`t have other ways to deal with all the negativity."

Theme	Illustrative Examples
Participant AS	"Media portrays violence as commonplace."
Participant AT	"Children are exposed to violence in the media (TV, movies, internet, and video games) at a young age which I believe desensitize them."
Effect of Society (video games, social media, news, etc.)	
Participant AZ	"Personally, I believe social media and video games have a big impact. Children don`t realize how bad shootings are because they see them on tv all the time, either on the news or in movies. Then they play games which involve shooting. I don`t think they realize how much of an impact their actions have."
Increased Access to Firearms	
Participant BL	"The government making it possible for people to have guns."
Participant BV	"Access to weapons (kids tend to get them from home)."
Participant CL	"The prevalence and accessibility of guns. Lax gun laws and the American culture`s love affair with and conviction of the rights to own gun."
Participant ED	"The accessibility of guns and ack of cohesive gun control measures between states."

Active Shooter Training

The third open-ended question asked participants to describe, if any, active shooter

training they have received, yielding 226 responses. In other words, nearly every participant (N=

234) responded to this question. The analysis of these responses yielded three main themes.

These themes revealed that 80 participants (35%) had received active shooter training through

their school and/or district, 139 participants (61%) had not received any active shooter training through their school or district, and seven participants (3%) had received active shooter training outside of their school/ district (see Table 4).

   Active Shooter Training via School and/or District. Participants (*n*= 80) expressed they had received some form of active shooter training via their school and/ or district. Participant Y stated:

   The school has several active assailant and lockdown drills throughout the school year so that staff and students are prepared. The staff is not aware of when these drills will occur so that it is more realistic. We take them very seriously and have invited law enforcement to be involved. We also have online or face-to-face trainings to discuss procedures, expectations, and "what-if" scenarios.

Many participants explained that their active shooter training consisted of frequent drills and video training provided by the district. For example, Participant BG stated, "We role play and do drills to practice what to do with our students/ staff," and Participant BH explained that "We watch the active assailant training video mandated by OCPS." Similarly, Participant AT described the training received this way:

   Our district provides a video for us to watch and a training at the beginning of the year over the procedures. We practice safety (fire drills, lock downs, lock outs, weather safety) once a week at our school. We are not told which safety procedures or date and time, we just know there is one a week.

It is worth noting that, while all of the study participants work for the same school district, their depth of active shooter training varies greatly from school-to-school and participant to participant.

No Active Shooter Training. Participants (*n*=139) reported that they had not received any active shooter training from either the school they teach at or the district they work in. For example, as Participant BD explained "Our schools don`t really do trainings. They just tell you to hide in the corner, have lights out and be quiet." In addition, Participant DF claimed that" I am told to hide with my kids in the taped off corner of my room. This is not real training. This is reactive." Clearly, the participants who reported having had no active shooter training feel they do not get sufficient training. In this regard, Participant EJ stated" No real training beyond an OCPS video telling us to hide with our kids in the corner."

Active Shooter Training Outside of School/ District. Participants (*n*= 7) explained that they had received active shooter training outside of their school/ district. Such training occurred as part of programs offered at previous places of employment or as workshops offered outside of school on their own personal accord. For example, Participant EO stated:

> In the county I taught in previously, we had active shooter training. We were taught to abandon the building if it was safe to do so, barricade the door to slow down the shooter, and fight back if absolutely necessary. In my current county, we have had no active shooter training and are still taught to "lock down" and hide under desks in case of an active shooter emergency.

In addition, Participant ES explained, "I am prior military, so that is where my training comes

from," and Participant X expressed, "I have active shooter simulation training provided by the

Orange County Police Department."

Table 4: Active Shooter Training (n= 226)

Active Shooter Training	Illustrative Examples
Active Shooter Training via School and/or District	
Participant D	"We are trained specifically to engage in safety protocols to protect students and ourselves."
Participant AN	"The county trains us annually and we have regular drills with the children to practice procedures."
Participant BG	"We role play and do drills to practice what to do with our students/staff.".
No Active Shooter Training	
Participant BM	"Very little. I do not want more training for what to do WHEN there`s an active shooter. I WANT more effective measures in place to PREVENT school shooting from ever occurring."
Participant CN	"Barely any training. The school just makes us watch a 30-minute video and expects that to be sufficient."
Participant DD	"No real training beyond an OCPS video telling us to hide with our kids in the corner."
Active Shooter Training Outside of the School or District	
Participant EA	"I participated in a full-scale training after Columbine."
Participant FF	"I was in the military for 12 years, so my training comes from that."

<u>Training for Identifying Risk Factors and Characteristics of Potential Shooters</u>

The fourth open-ended question asked participants to describe, if any, training they have had regarding how to identify risk factors and characteristics of potential shooters. The question yielded 226 responses. The thematic analysis of these responses produced two main themes. Most participants (n= 211; 93%) reported having received no training from their school or district regarding how to identify risk factors and characteristics of potential shooters. Only 15 participants (6%) reported having received training outside of the district for identifying risk factors and characteristics of potential shooters (see Table 5).

No Training. Participants (*n*=211) reported not having had any training with regard to identifying risk factors and characteristics of potential shooters. Participant J stated "Nothing. No one is bothering to train or educate teachers in this area." In addition, Participant AA explained, "I do not have specific training to identify the characteristics of potential shooters". Participants within this large sample appear to be frustrated in their responses about not having training in this area. Participant BM stated, "NONE and even if we did have training, nothing is currently done to address behavior concerns we have about our students."

Training Outside of the School and District. A few participants (*n*= 15) reported having had training outside of the school and district with regard to identifying risk factors and characteristics of potential shooters. As Participant G reported, "none at the school level, but I have a Master`s of Counseling degree and am familiar with people who are withdrawn, narcissistic, hostile, violent, and with mental illnesses." Similarly, Participant S indicated that the "Ed.S. degree in counseling has helped me with this. But, it would be good to have a refresher professional development each time research is able to share more about what has been

learned through recent shootings." Teachers with experience and training to help aid in

identifying risk factors and characteristics of school shooters can be a vital asset to school faculty

and staff. For example, Participant AS testified:

> I am a special education teacher, so I think I have had more than the average teacher. I
>
> have worked with students with behavioral issues in the past, and even those on house
>
> arrest in another state. I have worked with students who are aggressive and impulse and
>
> trained on de-escalation and "assisted relaxation breaks" restraining students who are in
>
> eminent danger or hurting themselves or others.

Table 5: Training for Identifying Risk Factors and Characteristics of Potential Shooters (n= 226)

No Training	Illustrative Examples
Participant P	"No training was attended."
Participant W	"I have had no training in this area."
Participant AA	"I do not have training specific to the characteristics of potential shooters."
Training Outside of the School or District	
Participant AW	"NYPD Police Academy Service with NYPD."
Participant CM	"I have a master`s degree in special education. I took an additional year to study Emotional and Behavioral Disorders. I have taught an outside separate day school for students with Emotional and Behavioral Disorders. I have also taught students successfully with Oppositional Defiant Disorders as well as many other mental health disorders."

<u>Steps to Take When Risk Factors and Characteristics of Potential Shooters are Identified</u>

The fifth and final open-ended question asked participants to describe what training, if any, they had regarding what to do once risk factors and characteristics of potential shooters are identified. In total, this question yielded 226 responses. The thematic analysis yielded two main themes. In fact, 211 participants (93%) reported having received no training from their school or district regarding what to do once risk factors and characteristics of potential shooters have been identified. A few participants (*n*=15, 6%) reported having received some training outside of their school or district regarding what to do once risk factors and characteristics of potential shooters have been identified (see Table 6).

No Training. Participants (*n*= 211) claimed to have received no training from their school or district regarding what to do once risk factors and characteristics of potential shooters have been identified. Participant J exclaimed:

NOTHING! They expect teachers to provide "social skills or emotional skills" classes, as if we are therapists. I see kids that could be potential dangers to the school, but I am told to teach them "social skills."

A sense of real frustration emerged among those responding to this question. For example, Participant DC reported:

None. Our campus doesn`t even take minor behavior infractions seriously. They give those kids candy and send them on their way. Our school is under construction and the back gate is wide open, all day. Who vetted the construction workers? Who keeps tabs on who comes and goes?

Training Outside of the School or District. A few participants (*n*= 15) explained that

they had received some training outside of the school or district regarding what to do once risk

factors and characteristics of potential shooters are identified. Participant H explained "I have

had Verbal De-Escalation CPI Training," and Participant DX pointed out having had "specific

instruction as part of my M.Ed." In addition, Participant AX reported "have had A.L.I.C.E.

training prior to becoming a teacher for OCPS."

Table 6: Training for Steps to Take When Risk Factors and Characteristics of Potential Shooters
are Identified (n= 226)

No Training	Illustrative Examples
Participant G	"No formal training or professional development. There is a very difficult and long process with many restrictions to identify students with behavioral issues at my school and in my district."
Participant O	"I have had no direct training in this area."
Participant AM	"I have not had training on how to identify students that exhibit risk factors for hurting others."
Training Outside of the School or District	**Illustrative Examples**
Participant AI	"I have a PhD in education with an emphasis on Exceptional Education."
Participant BS	"I was a firefighter for 9 years before I became a teacher. A lot of my training came from that."

<u>Summary</u>

The results reported in this chapter suggest that, while teachers may not have a personal

experience with school shootings, some do have experience with other forms of school violence

and that violence in any form concerns them daily. In addition, many teachers believe that the primary reason(s) school shootings occur and are on the rise due at least in part to the lack of mental health services for students, the effect of society (social media, TV, video games), and the increase in access to firearms. Teachers also don`t feel as though they are trained effectively in case of an active shooter event, nor do they feel they are trained sufficiently to identify risk factors and characteristics of potential shooters.  Finally, teachers don`t feel they are trained properly in what to do if they were to identify risk factors or characteristics of a potential shooter in their students. The next chapter proposes some conclusions, implications, and suggestions for future research based on the results of this thesis project.

CHAPTER FIVE: CONCLUSIONS, LIMITATIONS, AND RECOMMENDATIONS

This chapter proposes several conclusions based on the results of this analysis, as well as implications and suggestions for future research. Ultimately, the conclusions and implications set forth in this chapter may provide important insight regarding why school shootings occur, as well as what can be done to mitigate harm before it escalates.

Conclusions

Results from this exploratory examination of teacher perceptions regarding teacher self-efficacy and school violence reveals several conclusions.

First, teachers reported high levels of disciplinary self-efficacy, instructional self-efficacy, perceived ability to create a positive school environment, and perceived ability to influence decision-making. Women reported significantly higher self-efficacy than men in each of these areas. However, no significant differences emerged regarding self-efficacy related to political affiliation or number of years of teaching experience. These findings suggest that, when properly trained, teachers would also demonstrate high levels of self-efficacy with regard to identifying characteristics and behaviors of school shooters and doing the right thing in response to the characteristics in advance of an incident, as well as in response to an active shooting. Such training seems plausible given that existing research confirms "the typical characteristics of shooters has been a male with a mean age of 16 years, who abused drugs and alcohol, was involved in an interpersonal dispute, and frequently, belonged to a street gang" (Flores De Apodaca et al., 2012, p. 365).

With regard to the IDEA model, results from this study illustrate that teachers do perceive high levels of internalization (i.e., perceived relevance regarding their role in mitigating potential harm and that they want to be trained in ways that can teach them to identify potential characteristics and respond appropriately when they do see them in students). However, results also revealed a gap in teacher training with regard to the explanation component in the IDEA model. That is, about (a) why shooting are in fact occurring and on the rise across the United States and (b) what are the characteristics and behaviors of potential shooters. Results also revealed a gap in teacher training about specific actionable instructions regarding (c) what to do if students exhibit such characteristics and (d) what to do in response to an active shooting event. Thus, this study extends research on the IDEA model as a useful tool for identifying gaps in teacher training that could lead to improved efficacy particularly with regard to potential and actual school shooting events.

In addition, the fact that there were no significant self-efficacy differences related to political affiliation or years of teaching experience bodes well for the potential to train all teachers to effectively identify characteristics and respond to them in ways that demonstrate genuine concern for students which improves student satisfaction (Goodland, 1984). Finally, although women had higher self-efficacy than men in all areas examined, both men and women reported high self-efficacy levels overall. Again, this conclusion suggests that all teachers can be trained to be effective at identifying and responding to disconcerting student characteristics and behaviors.

Regarding the thematic analysis specifically, teachers from this study believe the rise of school shootings is due at least in part to mental health issues, societal norms (video games,

social media, news), and increased access to firearms. These ungrounded opinions suggest a need to bring explanation of the facts to teacher training events, as well. Opinion is not necessarily based on fact and, "when messages from various entities conflict, people continue to seek information until they discover a convergent theme among them" (Sellnow & Sellnow, 2019, p. 72). In addition, school administrators and school districts, should pursue consistent opportunities to communicate what they know, what they don`t know, and what they will be looking to find out during quiet times (pre-crisis), as well as during the event of school violence. Doing so will "foster perceived credibility among stakeholders and groups" (p. 73).

Finally, teachers overwhelmingly confirmed that they do not know what specific actions to take when they have identified characteristics or behaviors that might signal violence.   This confirms existing research on the need for school crisis interventions. Brock and Jimerson (2004) clarify that interventions are needed to "prevent and/or mitigate common stress reactions, identify those who might develop psychopathology (e.g., post-traumatic stress disorder, depression), prevent and/or mitigate dangerous coping behaviors (e.g., suicidal and homicidal behaviors), and provide appropriate referrals to mental health professionals" (p. 285). These programs also focus on family interaction, parent training, and family dynamics. Moreover, the results of this study reveal that teachers want training in what to do, not only in the moment of a crisis event, but prior to it in terms of participatory decision-making to deal effectively with potentials risks. In addition, teacher-student relationships, as well as healthy interactions with peers in the school environment, is a vital component.

<u>Implications</u>

In order for teachers to improve efficacy about identifying traits and characteristics of potential shooters, school violence prevention training modules and campaigns should be put into place. School personnel should be trained to watch for risk factors in students that may result in violent behaviors. Teachers should be given the "tracking school-associated violent deaths in the United States" checklist (Miller et al., 2008, p. 356). This checklist was created by studying common characteristics of youth who have caused these deaths and identifies behaviors which could possibly signify a youth`s potential for harming himself/herself or others. Behaviors identified in this checklist should alert teachers, administrators, and support staff to address the needs of the troubled students.

Research suggests that social skill instruction programs should be implemented in classrooms and have shown that implementing this kind of program is relatively effective in reducing the overall number of problem behaviors (Lewis, Sugai, & Colvin, 1998). However, it has been argued that intervention programs tend to be outdated. More recently, Newman-Carlson and Horne (2004) did a study implementing a bullying prevention program. Findings suggest that the program effectively increased teachers` knowledge and use of intervention skills, decreased students` classroom bullying behaviors (measured by disciplinary referrals), and increased teachers` self-efficacy.

With school shootings on the rise and mental health becoming a notable factor in these situations, teachers need extensive professional development training for identifying at risk students in the classroom. They need a tangible and effective program that gives them hands-on practice so that in the case of having a student who exhibits characteristics of a potential school

shooter, they are fully knowledgeable and comfortable taking preventive action. Colleges and universities should have similar active shooter and risk factor training as required course credit. Future teachers should be as prepared and aligned with the school districts` procedures and expectations as possible.

<div align="center">Limitations and Recommendations</div>

Several limitations of this study point to fruitful areas for future research. Due to time and access restraints, this study only scratched the surface of teachers` perceived self-efficacy in both the classroom and in their ability to identify and address problematic attributes and behaviors of potential shooters. The sample of teachers could be problematic because they were all from Orange County Public Schools, leaving the input of teachers in other counties in the greater Orlando area -and country writ large- out. In addition, the sample consisted of many more women than men. Future studies should sample a broader population of teachers both in Florida and the greater United States. Future studies might even target schools where active shooting instances have taken place, as well as schools where no such incidents have occurred. A more balanced sample of female and male teachers might provide richer results in this regard. Sample size was also a limitation of the study. While the sample ($n =325$) was large, ninety-one of these participants did not complete the entire survey. Therefore, having more time to gather a larger sample in order to account for incomplete surveys would be a benefit. Finally, this study was based on self-report survey data. Additional research ought to be conducted that employ other methodologies, including experiments, interventions, interviews, and focus groups to give different perspectives on this issue.

Summary

Many would argue that even one school shooting constitutes too many school shootings. As the number of school shootings continues to rise and take the lives of more and more young people, now is the time for strategic communication and action. We can no longer sit back and do nothing while our children, students, and teachers live in fear of going to work/school daily. It will take multiple strategies on multiple fronts to confront this crisis of epidemic proportions. Doing nothing is not an option. Teacher training programs focused on how to identify characteristics and behaviors of potential shooters and what to do once they are identified is an important first step—one we cannot afford NOT to take.

APPENDIX A: IRB APPROVAL

Institutional Review Board

FWA00000351

IRB00001138

Office of Research
12201 Research Parkway Orlando, FL 32826-3246

<u>EXEMPTION DETERMINATION</u>

April 17, 2019

Dear Tracy Gulliford:

On 4/17/2019, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study, Exempt Category
Title:	Teacher Perceptions About Emergency Preparedness
Investigator:	Tracy Gulliford
IRB ID:	STUDY00000327
Funding:	None
Grant ID:	None

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Kamille Chap

Kamille Chaparro
Designated Reviewer

APPENDIX B: SURVEY

DEMOGRAPHICS

1. What is your current age?

2. Please indicate your race/ ethnicity (choose 1)

   Asian

   Black

   Hispanic

   Native American

   White

   Other

3. Please indicate your gender (choose 1)

   a. Male

   b. Female

   c. Other

4. Please indicate your political affiliation (choose 1)

   d. Republican

   e. Democrat

   f. Independent

5. How many years of classroom teaching experience do you have?

6. What grade levels have you taught? (Check all that apply)

   Pre-K   6th

K   7th

1st   8th

2nd   9th

3rd   10th

SURVEY

Efficacy to Influence Decision Making

1.How much can you do to influence the decisions that are made in the school regarding issues related to potential school violence?

    1   2   3   4   5   6   7   8   9

    Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

2.How important do you believe it is to influence the decisions that are made in the school regarding issues related to potential school violence?

    1   2   3   4   5   6   7   8   9

    Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

3.How much can you do to express your views freely on matters related to school violence?

    1   2   3   4   5   6   7   8   9

    Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

4.How important do you believe it is to express your views freely on matters related to school violence?

    1   2   3   4   5   6   7   8   9

    Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

Instructional Self-Efficacy

5.How much can you do to influence the class sizes in your school?

               1   2   3   4   5   6   7   8   9

     Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

6.How important do you believe it is to influence the class sizes in your school?

               1   2   3   4   5   6   7   8   9

     Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

7.How much can you do to get through to the most difficult students?

               1   2   3   4   5   6   7   8   9

     Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

8.How important do you believe it is to get through to the most difficult students?

               1   2   3   4   5   6   7   8   9

     Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

9.How much can you do to promote learning when there is lack of support from the home?

               1   2   3   4   5   6   7   8   9

     Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

10.How important do you believe it is to promote learning when there is lack of support from the home?

               1   2   3   4   5   6   7   8   9

     Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

11.How much can you do to keep students on task on difficult assignments?

               1   2   3   4   5   6   7   8   9

     Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

12.How important do you believe it is to keep students on task on difficult assignments?

       1   2   3   4   5   6   7   8   9

    Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

13.How much can you do to motivate students who show low interest in schoolwork?

       1   2   3   4   5   6   7   8   9

    Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

14.How important do you believe it is to motivate students who show low interest in

schoolwork?

       1   2   3   4   5   6   7   8   9

    Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

15.How much can you do to overcome the influence of adverse community conditions on

students` learning?

       1   2   3   4   5   6   7   8   9

    Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

16.How important do you believe it is to influence adverse community conditions on students'

learning?

       1   2   3   4   5   6   7   8   9

    Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

17.How much do you know in order to identify students exhibiting potential shooter

characteristics or behaviors?

       1   2   3   4   5   6   7   8   9

    Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

18. How important do you believe it is to identify students exhibiting potential shooter characteristics or behaviors?

        1   2   3   4   5   6   7   8   9

   Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

Disciplinary Self-Efficacy

19. How much can you do to get children to follow classroom rules?

        1   2   3   4   5   6   7   8   9

   Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

20. How important do you believe it is to get students to follow classroom rules?

        1   2   3   4   5   6   7   8   9

   Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

21. How much can you do to control disruptive behavior in the classroom?

        1   2   3   4   5   6   7   8   9

   Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

22. How important do you believe it is to control disruptive behavior in the classroom?

        1   2   3   4   5   6   7   8   9

   Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

23. How much can you do to prevent problem behavior on the school grounds?

        1   2   3   4   5   6   7   8   9

   Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

24. How important do you believe it is to prevent problem behavior on the school grounds?

        1   2   3   4   5   6   7   8   9

   Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

25. How important do you believe it is to address boys that verbally abuse other boys for feminine characteristics (e.g., "fag," "sissy," "gay")?

1 2 3 4 5 6 7 8 9

Not at all Very Little Some Influence Quite a Bit A Great Deal

Efficacy to Enlist Parental Involvement

26. How much can you do to get parents to become involved in school activities?

1 2 3 4 5 6 7 8 9

Nothing Very Little Some Influence Quite a Bit A Great Deal

27. How important do you believe it is to get parents to become involved in school activities?

1 2 3 4 5 6 7 8 9

Not at all Very Little Some Influence Quite a Bit A Great Deal

28. How much can you assist parents in helping their children do well in school?

1 2 3 4 5 6 7 8 9

Nothing Very Little Some Influence Quite a Bit A Great Deal

29. How important do you believe it is to assist parents in helping their children do well in school?

1 2 3 4 5 6 7 8 9

Not at all Very Little Some Influence Quite a Bit A Great Deal

Efficacy to Create a Positive School Climate

30. How much can you do to make the school a safe place?

1 2 3 4 5 6 7 8 9

Nothing Very Little Some Influence Quite a Bit A Great Deal

31. How important do you believe it is to make the school a safe place?

        1   2   3   4   5   6   7   8   9

  Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

32. How much can you do to make students enjoy coming to school?

        1   2   3   4   5   6   7   8   9

  Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

33. How important do you believe it is to make students enjoy coming to school?

        1   2   3   4   5   6   7   8   9

  Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

34. How much can you do to get students to trust teachers?

        1   2   3   4   5   6   7   8   9

  Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

35. How important do you believe it is to get students to trust teachers?

        1   2   3   4   5   6   7   8   9

  Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

36. How much can you do to help other teachers identify potential shooter characteristics or behaviors?

        1   2   3   4   5   6   7   8   9

  Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

37. How important do you believe it is to help other teachers identify potential shooter characteristics or behaviors?

        1   2   3   4   5   6   7   8   9

  Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

38.How much can you do to enhance collaboration between teachers and the administration to improve school safety?

1   2   3   4   5   6   7   8   9

Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

39.How important do you believe it is to enhance collaboration between teachers and the administration to improve school safety?

1   2   3   4   5   6   7   8   9

Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

40.How much can you do to reduce school violence?

1   2   3   4   5   6   7   8   9

Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

41.How important do you believe it is for you to help reduce school violence?

1   2   3   4   5   6   7   8   9

Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

42.How much can you do to respond effectively to an active shooter?

1   2   3   4   5   6   7   8   9

Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

43.How important do you believe it is to be able to respond effectively to an active shooter?

1   2   3   4   5   6   7   8   9

Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

44.How much can you do to get students to believe they are safe at school?

1   2   3   4   5   6   7   8   9

Nothing   Very Little   Some Influence   Quite a Bit   A Great Deal

45.How important do you believe it is for you to help students believe they are safe at school?

1   2   3   4   5   6   7   8   9

Not at all   Very Little   Some Influence   Quite a Bit   A Great Deal

Open- Ended Questions

1. *Have you ever experienced a school shooting? (If yes, explain to the best of your recollection what happened).*

2. *What do you believe to be the primary reason(s) school shootings take place and continue to rise?*

3. *Describe what (if any) training you have had about what to do in the case of an active shooter.*

4. *Describe what (if any) training you have had about how to identify risk factors and characteristics of potential shooters.*

5. *Describe what (if any) training you have had to learn what to do when you identify a student that exhibits risk factor characteristics.*

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