

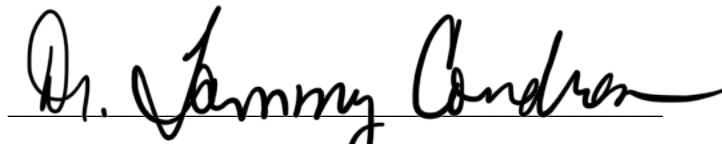
DIFFERENCES BETWEEN MISSOURI K-12 EDUCATOR PERCEPTIONS OF  
SAFETY ON CAMPUSES THAT ALLOW TEACHER CONCEALED CARRY AND  
THOSE THAT DO NOT

© Copyright by  
JASON C. KOELE  
2024

The undersigned, approved by the Department Chair of Graduate Studies in Education, have examined a dissertation entitled:

DIFFERENCES BETWEEN MISSOURI K-12 EDUCATOR PERCEPTIONS OF  
SAFETY ON CAMPUSES THAT ALLOW TEACHER CONCEALED CARRY AND  
THOSE THAT DO NOT

Presented by Jason C. Koele, a candidate for the degree of Doctor of Education and hereby certify that in their opinion it is worthy of acceptance.



Dr. Tammy Condren, Chair  
Associate Professor, Southwest Baptist University



Dr. Benny Fong, Committee Member  
Associate Professor, Southwest Baptist University

DIFFERENCES BETWEEN MISSOURI K-12 EDUCATOR PERCEPTIONS OF  
SAFETY ON CAMPUSES THAT ALLOW TEACHER CONCEALED CARRY  
AND THOSE THAT DO NOT

---

A Dissertation  
Presented to  
The Faculty of the Graduate Education Department  
Southwest Baptist University

---

In Partial Fulfillment  
of the Requirements for the degree of

Doctor of Education

---

By

Jason C. Koele, B.A., M.A., Ed.Spec.

Dr. Tammy Condren, Dissertation Advisor

## ACKNOWLEDGMENTS

I first want to thank God for giving me the ability and passion for educating our youth. Without His calling to the classroom, my journey would look much different. My family was an important part of my doctoral process. Without the support and encouragement of my wife and kids it would have taken longer or not happened at all. My wife, Jessica, has always supported me in my continued education and I am grateful for her understanding, patience, and encouragement throughout the process. To my sons, Emerson and Everett, I pray that as you grow, you seek wisdom through the Bible and knowledge through academics. Learning is a powerful tool. I hope that you continue to have a desire and drive for learning as you get older.

I also want to thank Dr. Tammy Condren for her dedication to seeing me through this process. Her encouragement to finish quickly, hours spent guiding me, and constructive criticisms to keep me on track were priceless. I am blessed to have been your final dissertation student before your retirement. Thank you to Southwest Baptist University, my cohort, and colleagues who encouraged me to the end. In the words of Dr. Fong, “D” for done!

## TABLE OF CONTENTS

ACKNOWLEDGMENTS.....	ii
TABLE OF CONTENTS.....	iii
LIST OF TABLES.....	viii
ABSTRACT.....	ix
INTRODUCTION.....	1
Theoretical Framework.....	2
Problem Statement.....	5
Purpose of Study.....	6
Research Questions.....	7
Null Hypotheses.....	8
Significance of the Study.....	9
Definition of Key Terms.....	10
Limitations, Delimitations, and Assumptions.....	11
Limitations.....	11
Delimitations.....	11
Assumptions.....	12
Design Controls.....	12
Summary.....	14
REVIEW OF LITERATURE.....	16

Introduction .....	16
Historical Responses to School Shootings .....	18
Response to School Shootings: 1970 – Columbine High School.....	20
School Safety Post Columbine and Virginia Tech .....	23
Sandy Hook Elementary Shooting .....	25
Parkland School Shootings.....	27
Uvalde Elementary Shooting.....	30
Public Education’s Response to Active Shooting Events .....	31
Conceal and Carry in Schools .....	34
Legislation and Advocacy .....	34
Public and Political Perceptions .....	38
Law Enforcement Perceptions.....	40
School Perceptions .....	41
Summary .....	44
METHODOLOGY .....	47
Introduction .....	47
Purpose of Study .....	48
Research Questions .....	48
Null Hypotheses .....	49
Participants .....	50
Selection and Sampling.....	50

Research Setting .....	51
Research Design .....	52
Variables and Measurement .....	53
Instrumentation.....	55
Procedures .....	59
Data Analysis .....	60
Summary .....	62
<b>FINDINGS .....</b>	<b>63</b>
Introduction .....	63
Research Questions .....	63
Null Hypotheses .....	64
Validity and Reliability .....	65
Descriptive Statistics .....	66
Sample .....	67
Demographics .....	67
Data Analysis and Findings.....	70
Findings.....	73
Research Question 1 .....	73
Null Hypothesis 1 .....	73
Research Question 2 .....	75
Null Hypothesis 2 .....	75

Research Question 3 .....	76
Null Hypothesis 3 .....	76
Summary .....	78
CONCLUSION .....	79
Introduction .....	79
Summary of Findings .....	79
RQ1 Findings: Perceptions of General Safety.....	81
RQ2 Findings: Perceptions of Individual Safety .....	82
RQ3 Findings: Educator Versus Administrator Only Concealed Carry.....	82
Discussion .....	83
Perceptions of General Safety .....	84
Perceptions of Individual Safety.....	88
Administrator Only Versus Teacher Concealed Carry.....	90
Professional Implications .....	92
Recommendations for Future Research .....	95
Conclusion.....	97
REFERENCES.....	100
APPENDIXES .....	117
Appendix A .....	117
Appendix B .....	118
Appendix C .....	125

Appendix D .....	132
Appendix E.....	134
Appendix F .....	136
Appendix G .....	137

## LIST OF TABLES

Table 1: K-12 Public Educators' Perceptions of Safety Factor Analysis Matrix .....	65
Table 2: K-12 Public Educators' Perceptions of Safety Reliability Statistics Matrix .....	66
Table 3: Rotated Structure Matrix for PCA with Varimax Rotation .....	66
Table 4: K-12 Public Educator Demographics .....	68
Table 5: Participants' School Demographics.....	69
Table 6: Participants' Demographic Information - Campus Security Measures .....	70
Table 7: K-12 Public Educators' Perceptions of General Safety.....	74
Table 8: Independent Samples Test for Perceptions of General Safety .....	74
Table 9: K-12 Public Educators' Perceptions of Individual Safety.....	75
Table 10: Independent Samples Test for Perceptions of Individual Safety .....	76
Table 11: K-12 Public Educators' Perceptions of Educator versus Admin Only Carry....	77
Table 12: Independent Samples Test for Perceptions of Educator versus Admin Only Carry.....	78

## **ABSTRACT**

Over the past 25 years school violence in the form of active shootings has steadily increased in frequency and devastation. Schools across the United States have leveraged a multitude of security mechanisms and philosophies to stop active shooter violence. The 2020 COVID pandemic further ignited violence within the schools and a rise in teacher concealed carry policies was seen throughout those states that allowed for such policies. The topic of teacher concealed carry has limited research and this study sought to fill a gap in literature pertaining to K-12 public educator perceptions of safety in schools that had a teacher concealed carry policy versus those that did not. This causal-comparative study sought to test the protection motivation theory and cognitive appraisal theory, comparing the perceptions of safety for educators with a teacher concealed carry policy and those without them in the areas of general safety, individual safety, and safety of administrator only carry versus teacher carry policies. A statewide survey was distributed to K-12 public educators in Missouri, a teacher concealed carry permitted state. Findings indicated there was a statistically significant difference between those that did not have a policy and those that did in the areas of general safety and administrator only carry versus educator carry policies.

## **CHAPTER ONE**

### **INTRODUCTION**

Since the Columbine shooting in 1999, shocking the nation and changing our approach to school safety, there have been 115 active shooter situations. These situations account for the loss of 189 student and staff lives and 313 injuries post-Columbine. To contextualize the data, the open-source K-12 School Shooting Database defines an active shooter as an individual who killed and/or wounded their victims, either targeted or random, within the school campus during a continuous episode of violence (Riedman, 2022). In the last 23 years, legislators and schools have dumped millions of dollars into increased infrastructure such as monitored security cameras, entry enhancements and protocols, bullet-resistant film, and steam vent systems. Federal- and state-level legislators have created new requirements for active threat school training, promoted School Resource Officer (SRO) programs, and held joint exercises with emergency response units. School concealed carry programs have been around for the last several decades (Martaindale & Schildkraut, 2022; McCuddy et al., 2022; Wood & Hampton, 2021, 2022).

According to Spitzer (2022), the concealed carry movement in the United States has grown substantially, due in large part to advocacy and social media campaigns provided by nonprofit organizations. Groups like the National Rifle Association (NRA), Second Amendment Foundation, Citizens Committee for the Right to Keep and Bear Arms, and the U.S. Concealed Carry Association (USCCA), have lobbied for concealed carry legislation, training permit holders, and filing lawsuits to expand concealed carry rights nationwide. These efforts had expanded teacher concealed carry laws to 33 states

as of June 2023. The modern concealed carry movement traces its roots back to the 1980s. At that time, only a handful of states allowed ordinary citizens to carry concealed firearms for self-defense. In 2008 the Supreme Court ruled in the *District of Columbia v. Heller* case that an individual's right to carry a handgun for self-defense outside the home is protected by the Second Amendment. In 2010 the Supreme Court had another landmark case in *McDonald v. Chicago* and again ruled in favor of pro-Second Amendment lobbyists in that the right to keep and bear arms fully applies to state and local governments. With these new precedents, nonprofits like the NRA and USCCA were able to overturn bans and further loosen licensing requirements for public and teacher concealed carry. Today, all 50 states allow for some form of concealed or open carry, with 18 states requiring no permit at all. The growing acceptance of concealed carry in public spaces is a direct result of advocacy and educational objectives of nonprofit organizations (Hess, 2019; Ward, 2023). The shooting at Uvalde Elementary once again propelled teacher concealed carry to the forefront. Chapter One outlines the theoretical framework used to ensure the validity of the research. It also contains sections detailing the problem statement, purpose and significance of the study, research questions with null hypotheses, definitions of key terms, limitations, delimitations, assumptions, and design controls.

### **Theoretical Framework**

Individual perceptions of safety can differ from person to person based on prior experience and crisis training. As schools continue to increase safety measures in their districts, educator perceptions also change regarding their work environment. The introduction of concealed carry in schools is a significant increase in safety and educator

perceptions have been minimally explored. To ensure validity of the research, two established theoretical frameworks were chosen by the researcher to examine K-12 educator perceptions of safety.

The first theoretical framework used by the researcher was Lazarus's (1966) cognitive appraisal theory, which has undergone several revisions, refinements, and has been utilized to create other theories such as the Rogers (1975) protection motivation theory (Krohne, 2001). Known at its first presentation as the stress theory, cognitive appraisal theory refers to an individual's primary and secondary response to psychological stress within a given environment. Psychological stress is defined as a relational or transactional concept directly tied to the individual and their perception of safety in each environment that is appraised to be taxing or exceeding the individual's resources and creating endangerment (Folkman, 2013). When the environment imposes stress on an individual, they begin two appraisal processes, primary and secondary. Primary appraisal includes the threatening tendency of the psychological stress to the individual. Secondary appraisal concerns coping, or the assessment of resources required to minimize, tolerate, or eradicate the stressor and the stress it produces (Lazarus, 1966).

An individual's appraisal is an emotional process dependent on their expectations of the significance and outcome of an event, thus, explaining individual differences in emotions in an environment that was objectively equal. Individual expectations can be determined by several factors including motivational dispositions, values, predictability, controllability, and imminence of the potential stressful event (Krohne, 2001). During an active shooting situation, it can be assumed that all involved would be in an equally high-stress environment with low ability to cope. Each individual's emotional response,

however, will be different based on their primary appraisal of psychological stress during the event. The perception of the stressor, in this instance an active shooting, may be impacted by the knowledge of an individual with a concealed weapon within the environment, thus changing the both the primary and secondary appraisal (Stock, 2022).

The second framework chosen, which is based on Lazarus's (1966) cognitive appraisal theory, was Rogers's (1975) protection motivation theory. According to Rogers's theory, individuals engage in protective behavior when they perceive a threatening event and they believe that lack of action would pose a threat to themselves and that performing the protective behavior would stop or deter the threat (Rogers & Prentice-Dunn, 1997). Rogers's theory identifies two main appraisals, threat and coping, as an individual goes through a response to a crisis. An individual will move through both appraisals quickly based on the perceived threat to discern their protection motivation and appropriate coping response. Threat appraisal is broken down into three actions: an individual's perceived threat vulnerability, the perceived threat severity, and maladaptive rewards. Maladaptive rewards are defined as the intrinsic and extrinsic benefits of neglecting a given protective behavior, resulting in a negative relationship with intention to act protectively (Rogers & Prentice-Dunn, 1997). If threat vulnerability and severity are perceived to be greater than the maladaptive rewards, an individual will be led to fear, inducing the coping appraisal. If no threat is detected or if the maladaptive rewards are greater than the threat, then the coping appraisal is skipped. If the coping appraisal is entered, an individual will assess self-efficacy, response efficacy, and response cost. Efficacy must be greater than the response cost for an effective adaptive response to occur (Rogers, 1975). An individual's effectiveness in response to decreasing harm is a

measurement of response efficacy. An individual's belief they can perform the behavior necessary to reduce or stop the threat of harm is a measurement of self-efficacy.

Both response efficacy and self-efficacy are aspects of the theories most relative to this study. Schools that approve concealed carry policy and individuals who carry within the district demonstrate or perceive they have a high response efficacy, decreasing or eliminating harm. Individuals who carry concealed weapons in K-12 buildings have a high self-efficacy, believing they will do what is necessary to reduce or stop the threat of harm (Stock, 2022). Both Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory (1975) provided the researcher with an understanding of how people develop their perception of safety in an environment of stressors, and what measures the individual may implore to reach that perceived level of safety.

### **Problem Statement**

Addressing student safety in public K-12 schools has been at the forefront of legislatures, administrators, and the public since the Columbine High School shooting in 1999. Since then, multiple shootings have occurred across the country with evolving tactics and speed. In the wake of the Uvalde, Texas, Robb Elementary School shooting in May of 2022 the question of why this continues to happen has stimulated heated debates surrounding teacher concealed carry (DeMitchell & Rath, 2019). Weapons have been on school campuses for decades in the form of local police presence, School Resource Officers (SROs), and now in some districts armed staff also known as School Protection Officers (SPOs), Marshals, or Guardians (Martaindale & Schildkraut, 2022). Despite large investments in strengthening physical school security measures and facilities,

school shootings continue. Fear among K-12 staff continues to grow as shootings persist (Weiler et al., 2021). If policies such as teacher concealed carry are implemented, schools must take into consideration the possible effects on those who are employed. Currently, limited research exists on educator perceptions regarding this topic. Research that has been conducted found varied support for teacher concealed carry based on the hypothetical implementation by students (Shamserad et al., 2021), educators (Wood & Hampton, 2022), administrators, and the public. The current study, using survey methodology, sought to fill the gap in literature specific to those schools in Missouri that had implemented or were implementing concealed carry strategies, also known as School Protection Officer (SPO) programming in Missouri, versus those that have not. Other states have similar programming called School Guardians or Marshals, which train and insure school employees to conceal and carry on campus.

The focus of this study was to examine teacher perception of safety related to the implementation of a SPO program within their K-12 Missouri school district, which included educators being allowed to conceal and carry a firearm. The problem is the literature has not fully addressed the differences in educators' perceptions of safety in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not.

### **Purpose of Study**

The purpose of this quantitative, causal-comparative study was to examine the perceptions of safety among K-12 teachers in schools that had implemented SPO programs and thus allowed staff to carry concealed weapons and those that had not. Research was specific to educators who worked at schools that already implemented

concealed carry policies versus schools that had not. This research was conducted in public K-12 school districts across the state of Missouri. Missouri passed legislation in 2014 following the mass shooting at Sandy Hook Elementary, allowing both the public to open carry and school districts to create policies for teacher concealed carry (Murphy, 2014). The independent variable was the ability for staff, administrators, or both to carry a concealed weapon on campus. The dependent variable was the educators' perceptions of safety while on campus. The researcher modified the Teacher Perspectives on School Safety and Guns in School survey (Wood & Hampton, 2022), and tested for validity and reliability, to measure the perception of safety by K-12 educators in a single midwestern state. To increase response rates and broaden the sample size, the researcher chose to send the survey electronically to all Missouri K-12 public educators.

### **Research Questions**

To examine the perceptions of safety of K-12 teachers and administrators (hereafter referred to as educators) regarding concealed carry on public K-12 campus the researcher explored following three research questions:

Research questions answered from this study were:

RQ1: What are the differences in educators' perceptions of **general safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School?

RQ2: What are the differences in educators' perceptions of **their safety** in public K-12 schools that have implemented School Protection Officer concealed carry

policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher's Perspectives of School Safety and Guns in School?

RQ3: What are the differences in educators' perceptions of safety in public K-12 schools that allow educators to use concealed carry and those that only allow administrators to carry as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School?

### **Null Hypotheses**

H<sub>01</sub>: There is no statistically significant difference in educators' perceptions of **general safety** in K-12 public schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

H<sub>02</sub>: There is no statistically significant difference in educators' perceptions of **their safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

H<sub>03</sub>: There is no statistically significant difference in educators' perceptions of safety in public K-12 schools that allow educators to concealed carry and those that only allow administrators to carry as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

## **Significance of the Study**

This study will contribute to the limited research conducted on concealed carry within the K-12 school environment. Studies have been completed specifically about concealed carry on college campuses, but very few have been done within the K-12 arena (Stock, 2022; Wood & Hampton, 2022). The research that has been conducted is limited. Research was found on perceptions of teachers and safety, student perceptions of teacher concealed carry, and law enforcement opinions (Martaindale & Schildkraut, 2022; McCuddy et al., 2022; Olive, 2019; Shamsrad et al., 2021; Wood & Hampton, 2021, 2022). Many school districts have implemented teacher concealed carry policies across the country without any research on how educators perceive safety within that environment. This study used in conjunction with others could provide insight for school officials to determine if such a policy is right for their constituents. It could also give law enforcement and safety experts another lens to make recommendations to schools who seek their guidance on such policies.

Rogers's (1975) protection motivation theory and Lazarus's (1966) cognitive appraisal theory were used to examine the teachers' perceptions of safety. There has been some research regarding the perceptions of students, teachers, administration, law enforcement, and the public on this issue (Martaindale & Schildkraut, 2022; McCuddy et al., 2022; Shamsrad et al., 2021; Stock, 2022; Wood & Hampton, 2021, 2022). However, research has not been widespread, and little research has been conducted on perceptions of educators in districts that have enacted such safety measures as concealed carry programming, and therefore has left several gaps and room for continued examination as school shootings continue to plague the country.

Several stakeholders could benefit from this study including the public, school districts, educators, and students. Safety continues to be one of the most crucial and discussed elements of the public. This study will contribute to and build upon existing research to equip districts with meaningful data to utilize in creating policies that keep students and staff safe.

### **Definition of Key Terms**

The following definitions of key terms are provided to ensure an accurate and deeper understanding of the context:

**Active Shooter** – An individual who killed and/or wounded their victims, either targeted or random, within the school campus during a continuous episode of violence (Riedman, 2022).

**Administration/Administrator** – For the purpose of this study, Administration or an Administrator is defined as a person(s) who oversees a school building or the school district.

**Concealed Carry or Conceal and Carry** – The act or practice of carrying a concealed firearm in public on oneself (Bishop, 2019).

**Educators** – For the purpose of this study, Educators are defined as both Administrators and teachers.

**Guardian or School Protection Officer** – Any person designated by a school district authorized to carry concealed firearms or a self-defense spray device in any school in the district (Missouri Title XI Act, 2014).

**Lockdown** – An emergency measure in which individuals are temporarily confined to an area during a threat of danger (Schildkraut et al., 2018).

**Mass Shooting** – Refers to four or more homicides in a single incident (Rees et al., 2019).

**Shooting Incident** – Each and every instance in which a gun is brandished, is fired, or a bullet hits school property for any reason, regardless of the number of victims, time of day, or day of week (Center for Homeland Defense and Security, 2023).

### **Limitations, Delimitations, and Assumptions**

The following limitations, delimitations, and assumptions were identified as potential impacts on the study.

#### ***Limitations***

1. Bias of the researcher's background and training in school safety
2. Bias of a participant who was personally impacted by the trauma of a mass shooting
3. Bias of a participant with a predisposition of pro or anti concealed carry
4. Bias of participants in a school that has implemented concealed carry policies
5. Participants who provide inaccurate data or choose not to answer specific questions
6. Participants responding with what they considered to be the “right answer” to the survey instead of their perceptions
7. Participants’ perceptions of the questions posed to them
8. The number of returned surveys

#### ***Delimitations***

1. Delimited through the lens of Lazarus (1966) cognitive appraisal theory
2. Delimited through the lens of Rogers’s (1975) protection motivation theory

3. Delimited to Missouri K-12 public school districts that had or had not implemented concealed carry policies
4. Delimited geographically to Missouri, a state that allowed for teacher concealed carry

### ***Assumptions***

1. Each participant would answer the survey questions honestly and without bias
2. Generalizability was to employees who worked at Missouri public K-12 schools
3. Theoretical framework was an accurate reflection of the phenomena being studied
4. Analysis selected and sample size were sufficient to detect statistically significant differences

### **Design Controls**

A causal-comparative research design was used to collect quantitative data to determine whether there were statistically significant differences in staff perceptions of safety in K-12 schools regarding concealed carry on campus. Limitations of this study included the bias of both the researcher and participants. Participants' bias of concealed carry law, prior experiences with shootings or gun violence, political affiliation, and moral belief were all aspects the researcher could not control when collecting research data. Bias of the researcher's extensive background and training in school safety may have limited the study. Limitations also included participant interpretation of questions or perception of a "correct" answer, which could also have affected the data collected and number of surveys returned. These limitations were controlled by the delimitations of the

study as well as utilizing an electronic survey to ensure a large enough sample of participants was collected where outliers could be removed. To address the possible bias of the researcher, the researcher created a journal of biases prior to the study. During interpretation of the data, the researcher referenced the journal of biases to ensure they did not influence interpretations.

Delimitations of this study included the theoretical lenses of Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory. These theoretical frameworks strongly related to this study's research questions, focusing on the responses and perceptions of human beings in relation to external stressors such as a school active shooting scenario. Data collected were delimited to K-12 public educators currently employed in Missouri. Missouri was a concealed carry state and did allow teacher carry within K-12 public institutions (Missouri Title XI Act, 2014). Due to state statutes being in place, all participants' districts had the same legal ability to create concealed carry policies, ensuring validity of the data. Surveys were sent to all public K-12 districts within the state.

Assumptions of the study were that participants would answer questions honestly based on their perceptions of safety within their school environment, and that participants were currently employed as teachers or administrators within a public school in Missouri. Participants were ensured both confidentiality and anonymity in order to minimize bias. An assumption was made that the theoretical frameworks of Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory were accurate reflections of phenomena from which to answer the research questions regarding

perceptions of safety and that the methodology and analysis of data were sufficient to detect statistical significance in answering those questions.

### **Summary**

The loss of 189 lives of students and staff, and 313 injuries post-Columbine are unacceptable (Riedman, 2022). Parents and the public want to see their children safe at schools across the country. Some states have adopted policies such as concealed carry, and many have not. Mass school shootings continue to occur each year in the United States and minimal research has been done on the effectiveness of concealed carry in schools and teacher perception of such policies (Peterson & Densley, 2021a). Safety continues to be one of the most discussed and funded issues in K-12 schools. The purpose of this quantitative, causal-comparative study was to examine the perceptions of safety among K-12 teachers in schools that had implemented SPO programs and thus allowed staff to carry concealed weapons and those that had not. This study sought to address this gap in research regarding K-12 educators' perceptions of safety and concealed carry.

Two theoretical frameworks were used in this research to explain how individuals perceive fear, assess harmful situations, and respond to them: Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory. Cognitive appraisal theory describes how an individual perceives safety in relation to their environment and the potential for harm. Protection motivation theory, the primary basis for the research, explores an individual's response efficacy or need to put safety measures in place to reduce or eliminate harm. This study also examined an individual's self-efficacy or their ability to believe they would respond to a situation to reduce or eliminate the threat of harm. These theories aided the researcher in understanding educators' perceptions of

safety on their K-12 campus related to concealed carry policies. If the theories were applied to the research, one could conclude an individual's coping mechanism or response efficacy to a potential active shooter might be to carry a concealed weapon. Thus, an individual, feeling safer due to the concealed weapon, encountering an environment that has a high enough potential to cause harm to them, might have a high enough self-efficacy to utilize the concealed weapon to reduce or eliminate the harm they may be caused.

Although several states allow concealed carry, it is a highly controversial issue both in schools and an individual's personal preference ("34 States Have a Path," 2022). As mass shootings in schools continue, along with the outcry to stop these tragic events, further exploring perceptions of safety and schools that allow concealed carry could have an impact on local school district decisions where such policies were allowed. Gathering data on educator perceptions in K-12 environments would allow stakeholders to further explore their options to keep students and staff safe.

Chapter Two of this paper will contain a review of literature, research, and history of concealed carry in schools. The literature review is organized in chronological order of mass school shootings, followed by specific research examples of concealed carry and their relation to the theories of Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory. In Chapter Three, the researcher will describe the research design and methodology guiding the study. Chapter Four contains the results of the data collected via survey and an analysis of the findings. Chapter Five concludes with a summary of the findings and recommendations for further research.

## **CHAPTER TWO**

### **REVIEW OF LITERATURE**

#### **Introduction**

After every school shooting, educators' perceptions of safety decreased and their fear of a shooting happening at their school increases (Lopez, 2022). The purpose of this quantitative, causal-comparative study was to examine the perceptions of safety among K-12 teachers in schools that had implemented SPO programs and thus allowed staff to carry concealed weapons and those that had not. After the Uvalde Elementary shooting in the spring of 2022 the conversation regarding how to keep students and staff safe once again took center stage. Safety measures such as teacher concealed carry, which have been around for several decades in some states, have been looked at as an option not only by legislators, but also law enforcement and educators as well (Lopez, 2022).

Reviewing literature of active shooters in school is pivotal in shaping future safety enhancements or legislative action, thus impacting the perceptions of safety for K-12 educators. With each active shooter incident and evolution of tactics, law enforcement reviews their response and safety protocols. New measures have been put into place both by law enforcement and schools to increase the perception of safety. Measures may include structural adjustments to buildings or exteriors, security systems, safety plans, or hiring an SRO. A more recent push has been to offer more counseling or psychological assessments to deter events, but also to support those involved with an incident retroactively (Rajan, et al., 2022; Stock, 2022).

The term "active shooter" was not used until the Columbine High School shooting in 1999, and law enforcement strategies have had to evolve with each new active shooter

scenario. Threats continue to evolve, learning from past shootings to cause harm to perceived weak targets such as schools, churches, and open access public spaces. Since 2021 there has been a significant increase in shootings at K-12 public schools. In 2021 the U.S. saw 256 shooting incidents, more than double the number in 2020. That number continued to rise to 308 shooting incidents in 2022, and 350 in 2023. Thousands of youths are being exposed to gun violence each year and a more nonpartisan comprehensive approach should be considered (Center for Homeland Defense and Security, 2023; Martaindale & Blair, 2019; Rajan, et al., 2022; Riedman, 2022).

Frequency and media coverage have played large roles in how the public and educators perceive active shooting events. Depending on which one an individual watches, news outlets can shape the perception one takes and determine the level of fear the viewer takes on. Awareness creates action, which turns into solicitations for legislative involvement to keep students and staff safe. However, some argue the media coverage lends itself to active shooter ideation and legislative action moves to gun control, allowing for active shootings to persist (McMurdo, 2019; Stock, 2022).

Following the Uvalde, Texas, Elementary Shooting in 2022, political partisanship battles began. The call for armed personnel in schools and the counter argument for fewer guns and more mental health funding emerged. In conjunction with the outcry for armed SROs in every school district came the surge of educator concealed carry programs and training centers across the country. With the rise in frequency of active shooting events, perceptions of safety in schools by educators is now impacted by whether concealed carry is allowed and by whom (Maiers, 2022; Weber, et al., 2023),

Two theoretical frameworks, Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory, were used in the current study as a lens through which to view how individuals perceive fear, assess harmful situations, and respond to them. Cognitive appraisal theory describes how an individual perceives safety in relation to their environment and the potential for harm. Protection motivation theory, the primary basis for the research, explores an individual's response efficacy or need to put safety measures in place to reduce or eliminate harm. This study also examined an individual's self-efficacy or their ability to believe they will respond to a situation to reduce or eliminate the threat of harm.

These theories aided the researcher in understanding educators' perceptions of safety on their K-12 campus related to concealed carry policies and aimed to improve the perception of safety on campuses. The following review of literature explores the topics of historical responses to school shootings, specifically from the 1970s to 2022, which aid in the perception of safety and concealed carry policies in schools, as well as the connection of these topics to the theories. Chapter Two contains a review of literature, research, and history of concealed carry in schools. The literature review is organized in chronological order of mass school shootings, followed by specific research examples of concealed carry and their relation to the theories of Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory.

### **Historical Responses to School Shootings**

Active threat events in K-12 schools date back to 1764 and the Enoch Brown massacre. Upset by government action against their people, members of the Lenape Native American tribe entered a one-room schoolhouse where they killed and scalped the

schoolmaster Enoch Brown and murdered nine students. In response, the government escalated bounties and scalping of Natives to deter such action from taking place again (National Teacher Hall of Fame, 2020). Prior to the 1970s, most shootings in schools were not done with the intent to kill *en masse*, but to commit a single homicide (Katsiyannis et al., 2018). Several examples of these types of school shooting events occurred in the 1800s. In 1853, at a school in Louisville, Kentucky, an administrator was shot and killed by the sibling of a student who was receiving corporal punishment. A similar instance occurred in 1890 in Brazil, Indiana, where a student shot and killed her peer for notifying administrators of her behavior at school.

The 20<sup>th</sup> century was marked by an even greater escalation of violence in schools and the evolution of the active threat. Bath, Michigan, in 1927, experienced the first school bombing, which remains the deadliest school disaster in U.S. history. The bombing took the lives of 45 students and teachers just 5 years after the Bath Consolidated School was opened. The bombing occurred at the hand of a local farmer and school board member after he was defeated in the 1926 spring election for the Bath Township Clerk position. The attacker, filling the school with hundreds of pounds of dynamite, detonated the first round of explosives, killing 38 people before returning with even more dynamite in his truck. The second explosion killed the remaining seven victims as they gathered by his truck assessing the situation from the first attack (Haddad, 2023). The 1966 University of Texas Tower shooting would also stain the 1900s as the deadliest of that era, and fourth most deadly attack at a school in U.S. history. For nearly 90 minutes a gunman inside the university tower shot at those below, killing 11 and wounding 31 before being shot and killed by law enforcement (McGraw, 2022). From

1764 to 1966, individuals relied upon the response of law enforcement officials to stop active threats. Although these incidents had reactionary intervention from law enforcement, they would not have the impact on school safety or law enforcement tactics as those of the 1970s and beyond. Entering the later part of the 1900s with such violence in schools led to a decrease in perception of environmental safety (Lazarus, 1966), and an increased perception of threat vulnerability and threat severity. However, maladaptive rewards would inhibit proper responses to future events as seen over time, as the focus of the nation moved to other events and neglect of protective behavior would eventually lead to an increase in school shootings (Rogers, 1975).

### ***Response to School Shootings: 1970 – Columbine High School***

Although there were several instances of homicides at schools from 1764 to 1966, there was not an annual occurrence that would affect the entire nation until the 1970s. A change in motivation by active shooters from revenge to notoriety during this time had greatly impacted copycat shootings. Increased media attention through news, social media, and outspoken public opinion on the matter have been said to have increased awareness and intention of the shooters, leading to greater evolution of school shooting tactics (Muschert, 2019; Schweikert, et al., 2021). This can be seen by the increase of school shootings across time as information sharing becomes faster and more accessible to the world.

According to the Riedman (2022) from 1970 to 1980 there were 61 shootings resulting in homicide, 19 active shooter situations, and 167 total shooting incidents at public K-12 schools nationwide. The decade was marked by the 1974 Olean High School shooting in Olean, New York, where the lives of three people were lost. Another nine

were injured, as law enforcement battled a several hours long standoff before entering and apprehending the threat (Bashiti, 2021). Years 1981 to 1998 saw 457 school shooting incidents with mass shootings occurring at Chicago's Moses Montefiore Public School in 1988, California's Cleveland Elementary in 1989, Lindhurst High School in 1992, and the 1998 shooting at Westside Middle School in Arkansas (Center for Homeland Defense and Security, 2023; Riedman, 2022). Until Columbine in 1999 schools across the country had no security plans, hardened exteriors, or active threat protocols. Teachers and students waited for law enforcement to arrive and mitigate the situation (Rajan et al., 2022).

Law enforcement procedures leading up to Columbine were linear and hierarchical in nature, but they had learned from the University of Texas tower shooting. Local agencies were required to create contingency plans with schools and special task units such as Special Weapons and Tactics (SWAT) teams to respond to active shooter situations. The development of SWAT marked the first major step in evolving with active threat situations (King & Bracy, 2019; Martaindale & Blair, 2019). Members of SWAT were considered the content experts in potential mass shooting or hostage scenarios. Patrol officers were to set up a perimeter only and defer to SWAT members to engage with the threat once they arrived. Entering Columbine, SWAT used individualized room-clearing methods instead of the current method, which requires them to move directly to neutralize the threat. This tactic slowed the egress of survivors, wounded, and allowed 40 minutes for the Columbine shooters to roam the school under no duress, mimicking the response time of the University of Texas Tower shooting (Blair & Duron, 2022; Martaindale & Blair, 2019; McGraw, 2022).

Analysis of the response by school and law enforcement during the Columbine school shooting illustrated the lack of preparedness for such an event and the vulnerabilities of school infrastructure and response prior to law enforcement arriving. Initially, the Columbine shooting was set up to be a bombing attack, much like that of Bath, Michigan, in 1927. The shooters had set explosives in the first-floor cafeteria near support columns with the plan to drop the ceiling on unsuspecting students while they ate lunch. When the explosives did not go off, the shooters approached the front of the building and began their assault. The attack, beginning at 11:19 a.m., did not see a response by law enforcement until the arrival of the SRO at 11:24 a.m. who exchanged fire with one of the shooters. The shooter retreated into the school as the SRO and incoming law enforcement officials set up the perimeter, waiting for SWAT. Schools at this time did not have “lockdown” protocols but relied on existing drills such as fire, tornado, and bombing to protect themselves (Blair & Duron, 2022; Flowers & Pixley, 2021; Kennedy, 2019; Martaindale & Blair, 2019; McGraw, 2022; Peterson & Densley, 2021b).

After SWAT arrived, a methodical search, clear, and triage approach was taken. The active shooters, after trying to shoot their explosive devices in the cafeteria, returned to the library where most of the casualties took place. Those in the library took a “shelter in place” approach by hiding under tables, exposing themselves to gunfire and direct threat from the active shooters. After killing many of the students who occupied the library, the shooters took their own lives. It was not until over 30 minutes later that the deceased students were found by law enforcement clearing the library (Blair & Duron,

2022; Flowers & Pixley, 2021; Kennedy, 2019; Martaindale & Blair, 2019; McGraw, 2022; Peterson & Densley, 2021a).

The event would become world renowned and enshrined as “Columbine,” a term that would strike fear in the world of education for decades to come. The shooting exposed vulnerabilities in legislation, school security, law enforcement, and training. Although there was an SRO on site to exchange fire, he was not inside, nor did he continue to engage the threat (Martaindale & Blair, 2019). Columbine would increase nationwide school and community perception of threat vulnerability, psychological stress, and perceived threat severity for several years to come. Applying Lazarus’s (1966) secondary appraisal of coping, schools would be flooded with money from legislatures for security upgrades, law enforcement would immediately review and change their tactical procedures, and new laws would be formed to minimize the stress produced by the traumatic event (Lazarus, 1966; Rogers, 1975). Despite the horror of the shooting, several advancements in safety would follow post-Columbine.

### ***School Safety Post Columbine and Virginia Tech***

The shooting at Columbine High School brought school safety to the forefront of discussions and pushed legislation and schools to respond differently than they had before. With the creation of the Advanced Law Enforcement Rapid Response Training (ALERRT) Center in 2002, schools began to receive guidance on how to keep students safe. Law enforcement agencies also saw a shift away from the SWAT-only approach to a first responder approach. New training began for teachers and officers alike, demonstrating an evolution in response to active threat situations. Columbine School District also took rapid steps to ensure the future safety of its students. These steps

included: district equipped with remotely controlled locking mechanisms, cameras with capabilities to track suspicious people, a 24-hour dispatch center, a team of armed campus patrol officers, advanced staff training from top psychologists and SWAT commanders, and staff monitoring of troubled students and social media accounts (Kennedy, 2019; Martaindale & Blair, 2019). The implementation of such strategies by Columbine School District were adopted across the country and deployed by those public schools and communities with the funds to do so. Public outcry following active shooting events have elevated public support for exploration of target-hardening schools and expanded school anti-bullying and counseling programs (Burton et al., 2021).

The outcry was once again heard after the 2007 Virginia Tech shooting. Taking place 8 years following Columbine, the Virginia Tech shooting still holds the record for fastest response time by law enforcement SWAT teams and the highest number of casualties in a single active shooter event (Bennett, 2020; Peterson & Densley, 2021b). The shooter, an Asian male institutionalized for mental health prior to the shooting, and of legal age to buy a firearm, defied the typical shooter “profile” adopted by the public and media post Columbine. The shooting exposed a loophole in the 1986 Firearms Owner Protection Act, which made it illegal for an individual with a diagnosed mental health disorder to purchase a firearm. However, the Act did not address discharged patients from mental health hospitals from being labeled in the firearm background check system. A review of the legislation led to the adjustment of both the Firearms Owner Protection Act and also adopted measures in the Federal Clery Act of 1990 surrounding the public reporting of active shooter contingency plans and emergency notification systems

required in schools (Bendici, 2017; Clery Center, 2022; King & Bracy, 2019; McQuiller, 2019; Schweikert et al., 2021).

Along with changes in legislation, schools adopted positive climate programs, further implementation of representative law enforcement presence on campuses, and a new focus on identifying trauma-impacted students versus the zero tolerance and tough on crime approach of the 1990s. Lazarus's (1966) primary appraisal of psychological stress induced by the Virginia Tech shooting brought about a rapid secondary appraisal of renewed calls for concealed carry on university campuses in more than 12 states. At that time, bills to allow teacher concealed carry both on university campuses and in K-12 schools were not widely adopted (Ball, 2022; Scudder, 2021). The Virginia Tech shooting imposed a greater perception of threat vulnerability and severity, leading to a reassessment of ways to mitigate active shootings on both college and K-12 campuses. The outcome of the shooting was so horrific, fear gripped the nation, leading to an effective adaptive response to mitigate these events from occurring again. Despite the response induced from Virginia Tech, just 5 years later in Newtown, Connecticut, the nation would again be faced with another tragedy due to the maladaptive reward of time and other national events, distracting from actions of intentionality to solve the issue of active shootings (Lazarus, 1966; Rogers, 1975).

### ***Sandy Hook Elementary Shooting***

The Newtown, Connecticut, Sandy Hook Elementary shooting in 2012, which took the lives of 20 students and six staff, again reshaped school safety. The Sandy Hook shooter was a troubled 20-year-old who was allegedly obsessed with violence and death. Former classmates described him as quiet but disturbed. The shooter had developmental

disorders and declining mental health in his teenage years, when his parents' marriage also dissolved, and violent tendencies and warning signs documented by law enforcement escalated in the years leading up to the mass shooting. (Peterson & Densley, 2021a; Williams, 2022). According to chronicles documented by Peterson and Densley (2021a), the year prior to the shooting, his mother noted his behavior increasingly becoming withdrawn and isolated. It was also noted that he was fixated on spree killings, compiling a spreadsheet detailing over 400 mass shootings as apparent inspiration. His mother's gun ownership further enabled his capability to harm others. On December 14, 2012, he killed his mother at their home before driving and parking his car at the entrance to Sandy Hook Elementary. The active shooter shot through a window at the entry of the building and began shooting those in the hallway with a semiautomatic rifle, before entering several unlocked classrooms. After claiming the lives of 26 individuals, he took his own life as law enforcement closed in (Peterson & Densley, 2021a; Williams, 2022).

In the aftermath, Sandy Hook families grieved, and the small community was torn over policy debates and mental health impacts. Nationwide, there became growing fear that violence would enter their school next. That sense of fear again led to the restructuring of school safety, legislation, and law enforcement. Sandy Hook and the other six school shootings that occurred in 2012 showed recurring red flags where intervention may have prevented violence. Isolation, victimization, obsession with weapons or violence, and leaks of intentions were all warning signs of the Sandy Hook shooting (Highberger et al., 2022; Peterson & Densley, 2021a). In one analysis across school shootings, 96% of attackers exhibited clear signs of crisis requiring support undelivered by flawed systems. Schools and communities alike looked for more ways to

implement climate surveys, anti-bullying programs, and crisis plans to catch warning signs (Dagenhard et al., 2019; Coleman, 2023). Rapid legislative changes also occurred regarding teacher concealed carry. Just 50 days following the Sandy Hook shooting, South Dakota became the first state to allow armed teachers to deter or stop an armed school threat. Connecticut also took up the issue along with the introduction of 450 different bills on school safety to be considered (National Conference of State Legislatures, 2022; Pacheco, 2022; Yacek, 2018).

The loss of 20 young children during the Sandy Hook Elementary shooting was one of the most tragic events in U.S. history, and one that would escalate the primary appraisal of psychological stress globally. It imposed an even greater perception of threat vulnerability and severity due to the nature of the event, leading to an immediate secondary appraisal in the call for mitigation of active shootings on K-12 campuses. Despite the response and passed legislative efforts induced from Sandy Hook, the nation would again see a devastating active shooter at a Parkland, Florida, school districts due to the maladaptive reward of time and national distractions (Lazarus, 1966; Rogers, 1975).

### ***Parkland School Shootings***

Despite the efforts of legislators across the country and schools that could afford to install safety measures after Sandy Hook in 2012, school shootings have persisted each year. The year 2018 is marked by two notable school shootings among the 26 total that occurred that year. Occurring in February 2018, Marjory Stoneman Douglas High School in Parkland, Florida, and in May of that same year at Santa Fe High School in Texas, history once again repeated itself and solidified the escalating reality of school shootings in America. Separated by three months and over 1,500 miles, the two school shootings

share numerous parallels to each other and prior school shootings regarding shooter profiles, warning signs overlooked, and the failure of mitigation strategies learned since the 1999 Columbine shooting by law enforcement, schools, and communities (Peterson & Densley, 2021a; Riedman, 2022).

The Parkland shooter, who previously attended the school district, had a turbulent upbringing and long history of behavioral and developmental issues. Former counselors described violent tendencies appearing as early as middle school, including threats involving firearms and attempts to harm animals. Though concerning behaviors prompted involvement across several Florida agencies, breakdowns in information sharing and coordination allowed the shooter to amass an arsenal of weaponry without law enforcement intervention. In 7 minutes, the shooter murdered 14 students and three staff members before fleeing the scene. He was eventually apprehended and convicted for his crimes (Blair et al., 2013; Flowers & Pixley, 2021; Pacheco, 2022).

Nationwide, students across demographics reported heightened anxiety regarding the possibility of shootings in their own schools. The anxiousness led to the creation of the “#Never Again” movement in a campaign for gun control measures. The group reignited the gun control issue at the national level both legislatively and in the public. Boycotts of businesses with ties to the National Rifle Association (NRA) created a division in stances among American businesses (Catlett, 2019; LaRose et al., 2021; Warnick & Kapa, 2019). Another outcome of the Parkland shooting was the formation of the Federal Commission on School Safety by President Trump and the Secretary of Education. The commission focused on making schools less attractive targets by arming

and training staff, as well as bolstering mental health services (Highberger et al., 2022; Kissel et al., 2019).

According to the Parkland, Florida, Marjory Stoneman Douglas Public Safety Commission (2019) report, the event also called into question law enforcement presence and response to active shooter situations. Several campus police were on site when the event began and did not immediately respond to the threat, a tactic instituted after Columbine. Instead, campus police reported the sound of firecrackers across school radios. When it was discovered that the sound was in fact gunfire, campus officers sought shelter to avoid injury and waited for backup (Peterson & Densley, 2021a; Thompson, 2024).

With the tragic loss of more young students by an active shooter the primary appraisal process was once again engaged. Despite the decades of changes by law enforcement and schools, the secondary appraisal led to another increase in perceived threat vulnerability and severity aiding in self-efficacy for individuals as they attempted to seek a new way to tackle the issue. While some families considered activism around gun access or policies, most ultimately directed their energy toward suicide prevention and expanded mental health resources at their schools and state legislators. These adaptive responses to address active shootings derived from the public's new push to find the active shooters before they could carry out their plans. This approach called for schools and government agencies to be proactive in identifying at-risk individuals and sought to rehabilitate the threat prior to them killing (Katsiyannis et al., 2018; Lazarus, 1966; Rogers, 1975).

### *Uvalde Elementary Shooting*

After schools resumed face-to-face instruction post-COVID in 2021, school violence drastically increased in occurrences from prior to the lockdown. There were 38 fatal school shootings in 2021 and another 38 in 2022, including Robb Elementary in Uvalde, Texas, where 21 students and staff lost their lives (Riedman, 2022). At 11:29 a.m. the first 911 call was made by an Uvalde school employee. It was not until 11:32 that a Raptor Alert was sent for a district wide lockdown. By that time, the active shooter had already fired shots at the building, had jumped a fence, traversed the open field playground area, and approached the building's side exterior doors, which were unlocked. The shooter walked directly to Rooms 111 and 112 at approximately 11:33 a.m., where he would find Room 111 unlocked and unbarricaded, allowing him to open fire immediately. Approximately two minutes later, law enforcement arrived and entered the building (U.S. Department of Justice, 2024).

Officers waited over an hour for their commanding officer to direct them to breach Rooms 111 and 112 of Uvalde Elementary. The response would be longer than that of Columbine. A series of failures both by law enforcement and the school in procedures and communication had devastating consequences. An SRO was employed by the district but was not on site at the time of the shooting. It is not known whether he was at another building in the district. Following the Uvalde shooting, media coverage and legislators once more debated over police responses, gun control measures, and school safety policy. In 2022, 51% of schools nationwide had a sworn law enforcement officer routinely carrying a firearm around campus and 65% had one or more security guards present. Shortly after the shooting, Texas legislators, along with Governor Abbott, signed into law

expanded firearm use for educators (Fearnow, 2019; Milligan, 2022; Reilly, 2022; U.S. Department of Justice, 2024).

The escalation of school shootings across the country throughout 2021 and 2022 coincided with the highest levels of community primary appraisal stress, despite school-based, low-level crime being at historic lows during that time (Division for Emotional and Behavioral Health, 2024; Lazarus, 1966). Continued secondary appraisal adaptive responses such as efforts to fund mental health prevention initiatives, SROs, school security measures, and a broader state adoption of teacher concealed carry legislation aimed to decrease perceived threat vulnerability and severity throughout the country. Research into school shootings is constantly seeking ways to mitigate and stop school shootings. Schools have learned from this research and continue to evolve with their responses (Lazarus, 1966; Riedman, 2024; Rogers, 1975).

### ***Public Education's Response to Active Shooting Events***

Research to understand school shootings has been a national priority since the 1999 Columbine attack as researchers look for patterns, trends, and profiles of active shooters. Following the Columbine shooting, researchers coined the terms “Columbine effect” and “social contagion” to describe copycat active shooters. Post-Columbine to date has seen a trend of increased violence, specifically in K-12 schools as marked by the examples of Sandy Hook, Santa Fe, Parkland, and Uvalde shootings. Data collected between 1990 and 2017 on school active shootings suggest an increase of risk occurs in the same and neighboring states after an attack. Understanding this phenomenon has helped heighten awareness of students of risk following an active shooting incident (Docherty et al., 2022; Kowalski et al., 2021; Schweikert et al., 2021). Data were also

collected by the Secret Service in collaboration with the U.S. Department of Education regarding active shooter characteristics for schools to assess their student body and address environmental or mental health concerns. Ten key findings were discovered relating to 37 reviewed incidents of “targeted school violence”. Factors associated with the reviewed incidents include the following:

1. incidents were not sudden or impulsive
2. others knew of the attacker’s idea
3. most attackers did not threaten targets ahead of the attack time
4. no accurate or useful profile of the attackers exist
5. most attackers exhibited behavior of concern prior to the attack
6. most attackers experienced problems coping with losses or personal failures
7. most attackers felt bullied or injured by others
8. most attackers had access to guns
9. often other students were involved
10. most shootings ended without law enforcement intervention though officers responded (Katsiyannis et al., 2018, p. 2564)

Further, research since 1999 has shown firearm-related homicides and children killed by firearms were significantly higher in the United States compared to any other country (Hong & Espelage, 2020; Rees et al., 2019). The FBI concluded in its 20-year study that K-12 school settings were the third likeliest place for an active shooter situation, representing 13% of all incidents. Active shooting incidents that occurred in businesses either open or closed to pedestrians accounted for 41% and 15% were in open spaces. It has also been determined that in educational environments, most active shooter situations

were located on higher education campuses or high schools. Shootings were carried out by predominately White males between the ages of 19 and 24 and were either apprehended or killed by law enforcement or suicide at the scene. The demographic research of active shooters has helped educators focus on preventative strategies of mental health awareness and the connection of agencies to assist in restorative practices for those in need (FBI Department of Partner Engagement, 2020; FBI Office of Partner Engagement, 2021, 2022). Despite the research and development of mental health access, increased support and implementation of SRO programs, advancements in school infrastructure security and training, school shootings persist.

Applying Rogers's (1975) protection motivation theory, the public, which has seen multitudes of active shootings in schools since 1999, has increased safety and security measures as they examine their local educational facilities. Individuals have determined there to be a high enough threat possibility across the nation, based on the previous examples the past two decades, for their willingness to support legislation and local education agencies in the adoption of measures their local municipality deem appropriate to ensure the safety of their students. This includes the teacher carrying a concealed weapon in K-12 school settings in order to decrease the odds of the threat (Reilly, 2022). These cognitive shifts in support for schools to adopt teacher concealed carry policies since 2012 demonstrate a perception of safety through the threat-appraisal process as communities perceive a higher risk of harm and take steps to mitigate mass shootings in their local schools (Lazarus, 1966).

## **Conceal and Carry in Schools**

### ***Legislation and Advocacy***

Concealed carry in schools is not a new topic, but one that has continued to grow in implementation as legislation and schools continuously seek ways to improve school security due to continued school shootings. Prior to Columbine, the early 1990s saw a wave of violence and crime throughout the country. Congress passed the Gun Free Schools Act (1994) to deter the public and students from bringing firearms on K-12 campuses. Post-Columbine calls for the implementation of laws to protect students were overwhelming. Communities looked to schools for immediate improvements in security; however, funding and legislative support were not accessible at that time (Greenberg, 2019; Mancini et al., 2020). It was not until after the Santa Fe and Parkland school shootings that funding and liability concerns for such initiatives like expansion of surveillance, metal detectors, and profiling students posing risk were addressed by the passage of the STOP School Violence Act (2018). The Act allocated funding to states and developed the first STOP School Violence Prevention and Mental Health Training Program in conjunction with the STOP School Violence threat Assessment and Technology Reporting Program (Bureau of Justice Assistance, 2018; Mancini et al., 2020; STOP School Violence Act, 2018).

Although the STOP School Violence Act (2018) did not allow funding to be used for the purchase of school firearms or the training of firearm use by school employees, programs and advocacy efforts had already begun several years earlier. Following the Sandy Hook Elementary shooting in 2012, the concealed carry movement in the United States grew substantially thanks in large part to advocacy and education provided by

nonprofit organizations (Bureau of Justice Assistance, 2018; Greenberg, 2019; Mancini et al., 2020). Groups like the NRA, Second Amendment Foundation, Citizens Committee for the Right to Keep and Bear Arms, and the USCCA have lobbied for concealed carry legislation, training permit holders, and filing lawsuits to expand concealed carry rights nationwide. Further supporting teacher concealed carry, the National School Shield Task Force and NRA have advocated such policies could deter shooters, reduce casualties during active threat events, and increase perceptions of safety. Efforts by advocacy groups, widened fear by media coverage, and continued school shootings have expanded teacher concealed carry laws to 33 states as of June 2023 (Hess, 2019; Mancini et al., 2020; Wallace, 2022; Ward, 2023).

The modern concealed carry movement traces its roots back to the 1980s. At that time, only a handful of states allowed ordinary citizens to carry concealed firearms for self-defense. This began to change in 1987 when the state of Florida enacted the nation's first "shall-issue" concealed carry law requiring authorities to issue permits to all qualified applicants. The Florida law was championed by pro-gun groups like the NRA and served as a model for other states considering concealed carry liberalization. Throughout the 1990s and 2000s, more states steadily adopted concealed carry laws. By the mid-2000s, the majority of states had implemented shall-issue permitting systems. Groups like the Second Amendment Foundation provided legal support to individuals denied permits and filed lawsuits challenging restrictive may-issue laws that gave authorities excessive discretion over licensing. Such litigation transformed concealed carry into a judicially enforceable constitutional right affirming the right to bear arms extends outside the home (Spitzer, 2022; Ward, 2023).

The Supreme Court ruled in the *District of Columbia v. Heller* (2008) case that an individual's right to carry a handgun for self-defense outside the home cannot be restrained but is also not unlimited in nature as to the type of weapon being brandished. The case upheld the right to self-defense weapons in the home and on an individual's person, except for in places of sensitivity such as schools and government buildings. In 2010 the Supreme Court had another landmark case in *McDonald v. Chicago* and again ruled in favor of pro-Second Amendment lobbyists in that the right to keep and bear arms fully applies to state and local governments. With these new precedents, nonprofits like the NRA and USCCA were able to overturn bans and further loosen licensing requirements for public and teacher concealed carry. Today, all 50 states allow for some form of concealed or open carry, with 18 states requiring no permit at all. The growing acceptance of concealed carry in public spaces is a direct result of advocacy and educational objectives of nonprofit organizations. Newer nonprofit groups like the USCCA have garnered hundreds of thousands of members and have trained over 2,000,000 Americans (Hess, 2019; Spitzer, 2022; USCCA, 2023). Applying Rogers's (1975) protection motivation theory to the rise in teacher concealed carry policies and advocates, when the public continuously is exposed to mass shootings in schools, they examine the safety and security of their local educational facilities. If the individual determines there to be a high enough threat possibility, their willingness to support and potentially carry a concealed weapon in a K-12 school setting increases in order to decrease the odds of the threat.

In the wake of decades of school shootings, state legislative bodies across the United States have passed laws allowing teachers and other school staff to carry firearms

on school grounds. One influential case is the passage of Missouri Title XI Act (2014), which enabled school districts to designate teachers and administrators as "school protection officers" permitted to carry concealed weapons (Murphy, 2014). According to Murphy (2014), this made Missouri the first state to explicitly authorize arming teachers in K-12 schools. The bill was controversial, with proponents of the bill arguing it would enhance school security, allowing a rapid response to active shooters, while opponents contended that introducing more guns into schools could lead to accidental shootings and even more violence. Despite the debate, the law paved the way for similar policies in other states. Since the passage of Missouri Title XI Act, 33 states have passed laws allowing teachers to carry concealed weapons (Ward, 2023).

Research analyzing national data reveals the impacts of such laws have been limited thus far due to the use of alternative measures of security. In a study of over 2,000 schools, Curran et al (2020) found increases in security measures like SROs and metal detectors after the 1999 Columbine shooting, but no rise in armed teachers. The authors speculated public concern about expanded firearms access has limited implementation of teacher concealed carry policies. Reeping et al. (2022) affirmed public concerns as K-12 school shootings were correlated with more permissive state gun legislation and gun ownership. Despite the few studies completed and several gaps in research allowing teachers to carry guns appears to be growing in some regions, marking a shift in community support for school policy changes in concealed carry on campus. These cognitive shifts in support for schools to adopt teacher concealed carry policies demonstrates a perception of safety through the threat-appraisal process as communities

perceive a higher risk of harm and take steps to mitigate mass shootings in their schools (Lazarus, 1966).

### ***Public and Political Perceptions***

The prospect of arming teachers as a deterrent against school shootings has prompted debate among stakeholders and mixed public sentiment. A 2022 study by Wallace, found that middle school parents, students, and staff in one district largely opposed teachers carrying guns, voicing concerns about safety risks and impacts on learning climate. Policy makers and school districts were also found to be hesitant to adopt teacher concealed carry, citing potential for increased liability and insurance costs, and lack of appropriate training and oversight, along with the moralistic struggle for those who would carry while teaching (Wallace, 2022).

Applying the Lazarus's (1966) cognitive appraisal theory, communities such as those in Wallace's (2022) study support alternative measures of safety to match the level of perceived threat. Schools opt for hardening exterior safety measures such as adding cameras, ballasts, bullet-resistant film for windows, and fencing. Interior measures include metal detectors at entry ways, secure magnet locked entrance doors, and visitor-screening systems to mitigate risk of harm (Curran et al., 2020; Lamoreaux & Sulkowski, 2020; Pacheco, 2022).

However, surveys have revealed regional and political differences in support. A survey conducted by Weiler et al. in 2021 analyzed school board policies nationwide, finding districts in conservative-leaning states more often permit armed teachers. Justifications for arming teachers included the national average response time of 5-7 minutes by law enforcement officials. Arguments were made that most active threat

situations only last 3-5 minutes in length, citing the threat would be over before law enforcement arrival. Proponents of teacher-carry policies have cited potential faster response times by those on site versus waiting for law enforcement to arrive. Views on gun control measures, including teacher concealed carry, have been politically polarized for decades and became even more so in the political climate of the Donald Trump and Joe Biden administrations. Media coverage of high-profile school shootings coupled with political debate since Columbine have only fueled controversies surrounding gun control measures and teacher concealed carry policies (Hume & Perreault, 2022; Mancini et al., 2020; Pearce, 2020; Weiler et al., 2021).

Overall, views on concealed carry in schools have been nuanced and polarized. Supporters contend armed teachers could stop active shooters, while opponents argue introducing more firearms could endanger students. Furthermore, qualitative studies have revealed reservations among those directly impacted, though backing appears higher in some geographic areas and shows a relatively even national split along partisan lines (Hassett et al., 2020; Mancini et al., 2020; Pacheco, 2022; Schildkraut & Martaindale, 2022). Although these studies speak to perceptions of safety and teacher concealed carry, there are few of them, leaving several gaps in research. Due to increased school shootings since 2021, the public's primary appraisal has been heightened not only by the instances themselves, but also from constant media coverage. The result has been a cycle of secondary appraisal processes across decades seeking ways to eliminate active school shootings all together. Teacher concealed carry has been growing in implementation as a possible resolution, but its efficacy has been argued by both sides of the political isle (Hume & Perreault, 2022; Lazarus, 1966; Rogers, 1975).

### *Law Enforcement Perceptions*

The prospect of arming teachers as a deterrent against school shootings has been contentious among law enforcement, as well as the broader public. However, there have been only three studies to date that have captured law enforcement perceptions on the issue of teacher concealed carry (Blair et al., 2019; Schildkraut & Martaindale, 2022; Wood & Hampton, 2021). While some officers endorse the idea of training and authorizing teachers to carry concealed weapons as an additional safeguard and to offer a faster response, the three studies conducted indicate most law enforcement officials oppose such policies. Concerns among law enforcement officials for arming educators included but were not limited to the ability to execute proper tactical room entry techniques, handle potential hostage situations, and shoot a firearm accurately under duress without exposure to heightened situations on a regular basis. Furthermore, they cited increased risks due to more firearms in schools, potential confusion over roles during a school shooting response, and greater legal and public liability (Blair & Martaindale, 2013; Blair et al., 2019, 2021; Martaindale, 2021; Schildkraut & Martaindale, 2022).

In a survey of police chiefs and sheriffs across the country, Schildkraut and Martaindale (2022) found around 60% did not support armed teacher policies, while 35% were in favor. Similarly, Wood and Hampton (2021), in interviews with SROs, found many were skeptical of teacher concealed carry, feeling their consistent presence and relationships were more vital for school safety. The study also found that most school resource officers saw consistent policing presence as the optimal approach for school security, rather than arming teachers (Wood & Hampton, 2021). However, backing for

concealed carry among a sizable minority of law enforcement suggested some saw armed teachers as a complementary strategy for stopping school shooters when police were not present. With over 50% of school active shooters being apprehended or killed by police, supporters say these programs, especially in rural areas, can act as a deterrent or provide a quicker response to an active threat before law enforcement arrives (Federal Bureau of Investigation, 2020; Mancini et al., 2020; Martaindale & Schildkraut, 2022).

Research of law enforcement perspectives on teacher concealed carry has shown concerns, but also potential openness to the policy among officers. Overall, law enforcement perceptions on arming teachers have been mixed, though reluctant support has been shown over time (Martaindale & Schildkraut, 2022; Wood & Hampton, 2021). Law enforcement officials view the teacher concealed carry issue through the secondary appraisal process as they look to maximize resources to mitigate school shootings without jeopardizing the safety of others even further. Arguments could be made for and against teacher concealed carry based on local law enforcement perceptions as threat vulnerability and threat severity are influenced at a greater or lesser rate at the local level. School Resource Officers' opinions have not been studied in depth, despite being employed by school districts and potentially seeing the qualitative pros and cons of teacher concealed carry firsthand leaving several gaps in research (Lazarus, 1966; Martaindale & Schildkraut, 2022; Rogers, 1975).

### ***School Perceptions***

The possibility of arming teachers as a strategy to deter and respond to active shooters in schools has become a highly contentious policy issue among educators as well. The limited research that has been done on the subject has mixed perceptions

among educators, including both reservations and openness to the prospect of allowing concealed firearms to be carried by trained teachers (Scudder, 2021; Wood & Hampton, 2021, 2022). National educator surveys conducted by Wood and Hampton (2022) revealed divided views among teachers, often varying by school setting, region, and demographics. Meanwhile, administrator concerns largely centered on perceived safety risks and challenges developing policies for vetting, training, and oversight should such programs be implemented (Anthony, 2021; Scudder, 2021; Winston, 2016).

Quantitative studies on teacher attitudes uncovered a lack of consensus, with both strong opposition and moderate support evident across different samples. Utilizing the original teacher perception survey of this study in a Midwestern state, Wood and Hampton (2022) found that 75% of K-12 public school teachers did not think they or other school staff should be allowed to carry guns in school buildings, even with training and authorization. The majority felt introducing more firearms into schools would make them less safe overall. However, the researchers discovered variation based on school locale within the state. Teachers in rural areas showed higher levels of support compared to their suburban and urban counterparts. This aligns with Findley's (2014) localized case study survey in rural Missouri, which found most teachers favored concealed carry policies if colleagues volunteered, met training requirements, and kept guns securely stored. In contrast, surveying teachers across multiple states, Anthony (2021) found most respondents felt unsafe with the prospect of armed colleagues in their schools, though a sizable minority were open to concealed carry by qualified staff. Across studies, the lowest support appeared among female teachers (Findley, 2014; Olive, 2019; Pacheco, 2022; Scudder, 2021; Winston, 2016; Wood & Hampton, 2022).

Qualitative investigations have provided additional insights into concerns and reservations expressed by many teachers regarding concealed carry policies within their schools. Participants worried about elevated risks of intentional or accidental shootings, as well as negative implications for classroom climates, student relationships, and nonviolent disciplinary approaches. Most felt arming staff would escalate fear and tension in ways adverse to learning, preferring alternative strategies to prevent school violence. Other concerns included legal and public accountability for misuse of guns, and confusion for law enforcement responding to emergencies who may view armed teachers as threats (DeMitchell & Rath, 2019; Irwin et al., 2023; Yacek, 2018).

Perceptions from school and district administrators largely focus on practical implementation concerns regarding concealed carry policies. In a national survey, Weiler et al. (2021) found fewer than 25% of principals supported arming classroom teachers, with most citing general safety risks along with worries about accidents, improper firearm storage, and negative climates. Other interviews done with administrators in districts where teachers could carry guns found significant reservations, and described the extensive challenges leaders faced in establishing rigorous concealed carry qualification guidelines and getting buy-in from reluctant staff in implementing such policies (Pyo, 2020; Scudder, 2021). In surveys of college administrators, Stock (2022) found most felt arming teachers would not improve campus security given the difficulties of proper scenario training and doubted that teachers could provide effective emergency response compared to dedicated school resource officers (Somers et al., 2020; Stock, 2022).

On the other hand, some research has pointed towards potential openness to concealed carry policies among certain educator groups despite prevailing concerns.

Winston (2016) surveyed teachers in an urban public high school where administrators proposed establishing a concealed carry program. While acknowledging risks, many teacher respondents favored the policy if intensive recurring training were required, feeling armed staff could deter potential shooters and provide a faster on-site response if an attack occurred. In a Midwestern state allowing but not mandating teacher concealed carry, Shamsrad et al. (2021) surveyed high school teachers and students, finding that 40% of teachers supported the policy while students were overwhelmingly opposed. Supporters felt concealed carry could stop school shootings and that teachers were more trustworthy than police, though most teachers and students were against the practice, citing safety concerns.

In public school districts across the country the debate of teacher concealed carry continuously grows. There are very few studies which address the perceptions of safety from those most impacted by such a policy, leaving gaps in research. The perception of fear has been fueled by annual school shootings and rising school violence across the country. Arguments could be made for and against teacher concealed carry based on teacher perspectives dependent upon perceived threat vulnerability and threat severity at each local level. Schools have faced significant challenges in balancing the political community expectations of safety policies along with internal perceptions of safety by students and staff (Lazarus, 1966; Rogers, 1975).

## **Summary**

The purpose of this quantitative, causal-comparative study was to examine the perceptions of safety among K-12 teachers in schools that had implemented SPO programs and thus allowed staff to carry concealed weapons and those that had not. The

problem is the literature has not fully addressed the topic and has left several gaps in research. Gaps in research not only include the purpose of this study, but further examination of law enforcement and SRO, public, and student perceptions. Further research in these areas could address the problem of the limited studies conducted, and aid in public school decision making on policies regarding teacher concealed carry. As conversations of school safety intensify in debate due to seemingly annual media covered school shootings and statistically rising school violence, psychological stress has pushed our country into the secondary appraisal process on a constant basis (Lazarus, 1966; Rogers, 1975). Both Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory provided the researcher with an understanding of how people develop their perception of safety in an environment of stressors, and what measures the individual may implore to reach that perceived level of safety. The theories also informed the researcher in answering the research questions of the study, to provide insight into the perceptions of safety among K-12 teachers and administrators in schools that had implemented SPO programs and thus allowed staff to carry concealed weapons and those that had not.

Vetted systems such as lockdown procedures in active shooter drills have even come under scrutiny as recurring failures and student deaths in active shooter situations occur at schools (Eckhoff & Goodman-Scott, 2023; Howard et al., 2022). However, vetted systems are not the only areas drawing debate to solve the active shooter crisis that has plagued the United States for decades. The debate of teacher concealed carry has become a normalized secondary appraisal coping strategy for some districts across the country to eliminate the threat of active shooters.

As schools that have funneled millions of dollars into physical security measures, implemented active shooter drills, and hired their own police forces still come under attack by gun violence, many still seek answers as to how to stop school shooters. The perception of safety is a part of the threat appraisal process within Rogers's (1975) protection motivation theory, and one that legislators, administrators, and teachers are searching to secure. Allowing public educators to concealed carry falls within the coping appraisal process within that same theory. If a public school district allowed teachers to concealed carry, it may have the effect of reducing psychological stress due to individuals cognitively feeling safer (Lazarus, 1966; Rogers, 1975). Understanding educators' perceptions of safety in schools that have a policy versus those that do not helps address the gap. There is a great need for further research regarding teacher concealed carry, as more public schools across the country adopt these policies to prevent active shooters. Studying teacher's perceptions of safety and concealed carry policies are critical as they are the most impacted by such implementation. Looking deeper at their general safety, only allowing administrators to carry, and how they see their students being effected by a teacher concealed carry policy can aid in closing the gaps in research that currently exist and guide districts or safety consultants on if such a policy is right for them.

In Chapter Three, the researcher details the methodology for this quantitative study and examines the validation process of the pilot study. Chapter Four will contain the results of the data collected during the study along with an analysis of the findings. The research concludes with a summary of research findings and recommendations for further research noted in Chapter Five.

## **CHAPTER THREE**

### **METHODOLOGY**

#### **Introduction**

In the last 23 years, legislators and schools have allocated millions of dollars to increased security infrastructure. Federal and state level legislators have created new requirements for active threat school training, promoted SRO programs, and held joint exercises with emergency response units. A school safety tactic that have been around for several decades and has escalated in debate is teacher concealed carry (Martaindale & Schildkraut, 2022; McCuddy et al., 2022; Wood & Hampton, 2021, 2022).

Teacher concealed carry laws have expanded to 33 states as of June 2023. All 50 states allow for some form of concealed or open carry, with 18 states requiring no permit at all. The growing acceptance of concealed carry in public spaces is a direct result of advocacy and educational objectives of nonprofit organizations (Hess, 2019; Riedman, 2022; Ward, 2023). Educator concealed carry is a topic that has several gaps in research. This study sought to begin filling the gap by examining the perceptions of safety among K-12 educators in schools that have implemented SPO programs and thus allow staff to carry concealed weapons, and those that have not through the lens of Lazarus's (1966) cognitive appraisal theory, and Rogers's (1975) protection motivation theory. A quantitative study was chosen to determine the differences in educators' perceptions of safety in public K-12 schools who had implemented SPO concealed carry policies and those that had not. Chapter Three contains the methodology utilized to collect data for this study, as well as participant selection, instrumentation, procedures, data analysis, and the validation process for the modified survey used.

## **Purpose of Study**

The purpose of this quantitative, causal-comparative study was to examine the perceptions of safety among K-12 teachers in schools that had implemented SPO programs and thus allowed staff to carry concealed weapons and those that had not. Research was specific to educators who worked at schools that already implemented concealed carry policies versus schools that had not. This research was conducted in public K-12 school districts across the state of Missouri. Missouri passed legislation in 2014 following the mass shooting at Sandy Hook Elementary, allowing both the public to open carry and school districts to create policies for teacher concealed carry (Murphy, 2014). The independent variable was the ability for staff, administrators, or both to carry a concealed weapon on campus. The dependent variable was the educators' perceptions of safety while on campus. The researcher modified the Teacher Perspectives on School Safety and Guns in School survey (Wood & Hampton, 2022), and tested for validity and reliability, to measure the perception of safety by K-12 educators in a single midwestern state. To increase response rates and broaden the sample size, the researcher chose to send the survey electronically to all Missouri K-12 public educators.

## **Research Questions**

To examine the perceptions of safety of K-12 teachers and administrators (hereafter referred to as educators) regarding concealed carry on public K-12 campus the researcher explored the following three research questions:

Research questions answered from this study were:

RQ1: What are the differences in educators' perceptions of **general safety** in public K-12 schools that have implemented School Protection Officer concealed

carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School?

RQ2: What are the differences in educators' perceptions of **their safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher's Perspectives of School Safety and Guns in School?

RQ3: What are the differences in educators' perceptions of safety in public K-12 schools that allow educators to use concealed carry and those that only allow administrators to carry as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School?

### **Null Hypotheses**

H<sub>01</sub>: There is no statistically significant difference in educators' perceptions of **general safety** in K-12 public schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

H<sub>02</sub>: There is no statistically significant difference in educators' perceptions of **their safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

H<sub>03</sub>: There is no statistically significant difference in educators' perceptions of safety in public K-12 schools that allow educators to concealed carry and those that only allow administrators to carry as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

### **Participants**

Participants in this study were K-12 public school educators in the state of Missouri. Within the state of Missouri there were nine Regional Professional Development Centers (RPDCs), which are made up of varying demographics. All schools fell within the state statute that allowed districts to create policies concerning teacher concealed carry within their districts (Missouri Title XI Act, 2014).

Precautions were taken to mitigate risks to participants of the study to ensure confidential responses and anonymity, due to the sensitivity of the subject matter and participants' potential experiences with the content. An informed consent was provided to each participant prior to the survey detailing the purpose of the study and clearly stating the confidentiality and anonymity of their responses.

### **Selection and Sampling**

Participation selection was nonrandom, purposive sampling (Laerd Statistics, 2024). Participants were limited to Missouri public K-12 educators. These participants were chosen because of the teacher concealed carry law Missouri Title XI Act (2014) and increased participation in SPO programs across the state. According to the Missouri Department of Elementary and Secondary Education (2023) the population of the study was 106,766 K-12 public certified teachers and administrators. To determine the

differences in educators' perceptions of safety in public K-12 schools that had implemented SPO concealed carry policies and those that had not as measured by the modified version of Wood and Hampton (2022) Teacher Perspectives of School Safety and Guns in School, purposive nonprobability sampling was used. Nonprobability sampling is the process of selecting a sample that does not allow the probability for each member of a population to be selected as part of the sample (Laerd Dissertation, 2024). The nonprobability sampling of this study was purposive as only Missouri K-12 educators were chosen as participants. Additionally, individuals controlled whether participants completed the survey or not, leaving no control over the breakdown of demographic data collected. Sample size calculations were made to determine the needed number of responses to have an alpha level of .05, a power of 0.8, and a medium effect size (Faul et al., 2007; 2009). The sample size needed was 51 from schools who had a teacher concealed carry policy, and 51 that did not, for a total of 102. Three Independent samples *t* tests were conducted using the two groups (Laerd Statistics, 2024).

### **Research Setting**

At the time of this study, 34 states allowed for concealed carry by teachers. Twenty states allowed anyone with permission from a school authority to carry. Seven states allowed concealed carry with a permit and/or permission from school authority, while seven states required school employees who carried to hold a permit after receiving permission from school authority and completing a required amount of training (National Conference of State Legislatures, 2022). For the purpose of this study the research setting included public K-12 schools in the state of Missouri. Missouri was selected due to its state statute allowing any public school district to enact policies regarding teacher

concealed carry (Missouri Title XI Act, 2014). K-12 public schools in Missouri were not mandated to create policies regarding concealed carry, which ensured a cross-categorical data set to analyze perceptions of educator safety between those that had or do not have a policy in place.

### **Research Design**

A quantitative study was chosen to determine the differences in educators' perceptions of safety in public K-12 schools who had implemented SPO concealed carry policies and those that had not as measured by the modified version of Wood and Hampton (2022) Teacher Perspectives of School Safety and Guns in School. Quantitative research is the collection and analysis of numerical data to describe, explain, predict, or control phenomena of interest (Gay et al., 2012). A causal-comparative design was selected to determine the differences between groups, and to ensure the research was classified as nonexperimental, where the manipulation of the independent variable is lacking (Gay et al., 2012). Numerical data were collected from K-12 public educators about their perception of safety and teacher concealed carry.

All public K-12 educators were invited to participate in the study. A cross-sectional survey was used to gather data. Cross-sectional studies analyze data from a population from a single point in time. A survey was chosen in order to ensure a large sample size in an efficient amount of time (Wang & Cheng, 2020). The researcher, with permission (Appendix A), modified the original Teacher Perspectives on School Safety and Guns in School survey (Wood & Hampton, 2022), which measured the perception of safety by K-12 educators in a single Midwestern state. Reliability and validity of the original Teacher Perspectives on School Safety and Guns in School survey was unknown

and data were not able to be shared. In this study, the survey was modified with permission and a pilot was given to a sampling of K-12 public educators in two Southwest Missouri rural school districts, one with a teacher concealed carry policy and one without, to calculate the reliability and validity of the modified Teacher Perspectives on School Safety and Guns in School survey.

### **Variables and Measurement**

The principal component analysis (PCA) process has multiple steps the researcher followed in order to prove validity. The first step was to take a large set of variables and reduce them into a smaller set of variables that retained the majority of information in the larger set of variables. Next, the researcher had to ensure the standardization of data was accurate to prevent biased results. Upon completion of standardization, the variables were converted to the same scale to create the largest possible variance. The data from the modified survey were then analyzed using Statistical Package for the Social Sciences (SPSS) software to determine whether to accept or reject the null hypotheses (Jaadi, 2024; Laerd Dissertation, 2024).

To validate the modified Teacher Perspectives on School Safety and Guns in School the PCA process was used. The first step in the PCA process requires that five assumptions be met for each construct of the survey for reliability and validation to occur. The assumptions were as follows:

1. The survey had multiple variables measured at a continuous level using a range such as the 6-point Likert scale used in the study.
2. The survey utilized a linear relationship between variables.

3. The data were able to be reduced using Bartlett's Test of Sphericity, ensuring there were enough correlations between variables.
4. The survey had sampling adequacy or a large enough sample size to ensure reliable results.
5. The survey had no significant outliers that could influence the results disproportionately (Laerd Dissertation, 2024).

The PCA was run on a 16-question survey that measured perception of safety and teacher concealed carry on 34 K-12 public educators. The suitability of PCA was assessed prior to analysis. Inspection of the correlation matrix showed that 13 of the 16 variables had at least one correlation coefficient greater than 0.3. Questions 3, 7, and 11 were removed due to their low correlation coefficients and negative effect on the Kaiser-Meyer-Olkin (KMO) Measure of Sampling Adequacy. After removal of Questions 3, 7, and 11, the overall KMO measure was 0.76 with individual KMO measures all greater than 0.65, classifications of 'mediocre' to 'middling' (Laerd Statistics, 2024). Bartlett's test of sphericity was statistically significant ( $p < .001$ ), indicating that the data was likely factorizable.

PCA revealed three components that had eigenvalues greater than one which explained 33.9%, 27.1%, and 8.9% of the total variance, respectively. Visual inspection of the scree plot indicated that three components should be retained (Laerd Statistics, 2024). In addition, a three component solution met the interpretability criterion. As such, three components were retained. The three-component solution explained 69.9% of the total variance. A Varimax orthogonal rotation was employed to aid interpretability. The rotated solution exhibited 'simple structure' (Laerd Statistics, 2024). The interpretation of

the data was consistent with the perceptions of safety the survey was designed to measure with strong loadings of general perceptions of safety in questions 8, 13, 14, 15, and 16 on Component 1. Strong loadings of perceptions of administration and teacher concealed carry in were seen in questions 9, 10, and 12 on Component 2. Lastly, strong loadings of individual perceptions of safety were seen in questions 1, 2, 4, 5, and 6 on Component 3.

Cronbach's alpha was chosen to test the reliability of the survey due to its ability to be utilized with continuous data and surveys that included a Likert scale. Cronbach's alpha increases when the correlations between variables increase, allowing for internal consistency of the survey to be examined. The maximum value for the Cronbach's alpha was 1 and the minimum 0, with a score of 0.7 being considered reliable. Three Cronbach's alpha tests were run for each of the constructs within the modified survey pilot. The survey used within the study had a Cronbach's alpha of .894 for Component 1, .788 for Component 2, and .598 for Component 3.

### **Instrumentation**

The Teacher Perspectives on School Safety and Guns in School survey (Wood & Hampton, 2022) was modified and used to measure K-12 educator perceptions of safety (Appendix B). The original survey (Appendix C) was chosen as it was used in prior research regarding teacher perceptions of concealed carry (Wood & Hampton, 2021) as well as its use of statistics that quantified attitudes towards concealed carry and perceptions of safety. This survey was chosen as it best addressed the research questions for this study. There have been no other studies that have used the Wood's & Hampton (2021) survey and there are no other relevant instruments that could have been utilized for this study due to the limited research conducted on teacher concealed carry.

The original survey questions were broken into four sections. Sections 1 through 3 gave data on K-12 public educators' perceptions of personal safety and the safety of students at their school, their school's prevention and security measures, and firearm usage in schools. The fourth section asked demographic questions of the participants including race, ethnicity, political affiliation, and general information of the school in which educators were employed. The purpose of the four sections was to have all necessary data to examine the correlation between the respondents' background of school safety and their perception of safety of teacher concealed carry on K-12 public campuses. The format of the survey included yes/no questions and 6-point Likert scale questions. The Likert scale quantified the perceptions of public K-12 educators' safety on a continuum of *Strongly agree* (1) to *Strongly disagree* (6).

The first section of the original survey asked questions related to teachers' perceptions of personal safety and the safety of their students at school. Using a 6-point Likert scale on a continuum of *Strongly agree* (1) to *Strongly disagree* (6), seven questions were asked about the teacher's feeling of safety at school. Questions ranged from if educators worried about someone committing a school shooting at their school to how concerned they believed students were about safety at their school.

The second section explored the knowledge of their school's prevention and safety measures. Utilizing a yes/no model, 11 questions were asked. Teachers were asked if their school had physical safety measures such as fencing around the premises, metal detectors, and surveillance camera systems. Procedural questions were also asked, such as the utilization of metal detector wands, requirements of visitor check-in, and staff identification badges, as well as the conducting of random backpack and locker searches.

The third section of the survey focused on firearm usage on their campus and again utilized a 6-point Likert scale on a continuum of *Strongly agree* (1) to *Strongly disagree* (6). Teachers were asked to answer on the continuum the degree to which they agreed with eight different statements. Those statements touched on teachers being allowed to carry guns at school, the hiring of SROs or armed guards, stronger and looser gun control measures, and if gun-free school zones made them more vulnerable as a target. The last two questions of the section asked more personal questions about whether teachers would like to carry a registered handgun at school and if they would be more willing if compensated for doing so.

The final section of the survey collected demographic and background information of the respondents. Participants were asked to identify their gender, race, political affiliation, school population, building level in which they served, type of school at which they worked, the school's setting, years of service, if they conducted active shooter drills, and if they had experienced at least one firearm incident within the past year at school. The intent of capturing this data was to compare any statistically significant differences that existed between the groups studied.

The Teacher Perspectives on School Safety and Guns in School survey (Wood & Hampton, 2022) was modified (Appendix B) with permission. If the methodology of the modified survey had been shown to be invalid or unreliable, the research conducted in the study would not have been meaningful. To ensure reliability and validity of the modified survey, a pilot study was conducted. The design of the survey was the same as that of the larger study, which included three constructs that met the assumptions measure to

perform PCA. Furthermore, three Cronbach's alpha tests were run for each of the constructs to ensure reliability and validity throughout all the questions within the survey.

The pilot survey was sent to two Southwest Missouri rural K-12 public schools of similar demographics to be completed within a 2-week time frame. The same 2-week time frame was given for the larger study. The pilot survey was sent to one district that had a teacher concealed carry policy, and one that did not. This process was utilized to determine the PCA and reliability calculations. The pilot survey allowed the researcher to collect sample data, giving insight into potential problem areas of wording within the survey, respondents' comprehension of the questions, and potential response time of the larger survey. The pilot provided evidence that the modified survey was a reliable data-collecting instrument because of the PCA process and reliability calculations.

Data from the survey was categorized, totaled, and divided analyzed to find the mean score to determine the differences between educators that have a teacher concealed carry policy versus those that do not. Educators' perception of general safety was measured by five questions on a 6-point Likert scale. On a sliding scale of 1 to 30, a cumulative mean score below  $M = 15$  would indicate a higher level of educators perceived general safety with a teacher concealed carry policy. Educators' perception of individual safety was measured by five questions on a 6-point Likert scale. On a sliding scale of 1 to 30, a cumulative mean score below  $M = 15$  would indicate a higher level of educators perceived individual safety with a teacher concealed carry policy. Lastly, educators' perception of safety regarding an administrator only versus a teacher concealed carry policy was measured by three questions on a 6-point Likert scale. A cumulative

mean score below  $M = 9$  would indicate a higher perception of safety in schools with educators concealed carry versus administrator only policies.

## **Procedures**

The Southwest Baptist University Research Review Board (RRB) reviewed and approved the research process (Appendix D). A synopsis of the study, instrument utilized, informed consent documents, and time frame outlining the study along with the assurance of anonymity and confidentiality (Appendix E) were emailed to 497 superintendents of Missouri K-12 public schools requesting permission for their staff to participate (Appendix F). If the superintendent approved of their district's participation a follow-up email was sent providing a link to the modified survey for disbursement to staff, requesting a 2-week deadline of completion (Appendix E). A follow-up email (Appendix G) was sent 1 week after the deadline to encourage participants to respond, and after an additional week from the reminder email the survey stopped accepting responses, which concluded the data collection process for that district.

The researcher sent out the survey soliciting responses for this study in the spring of 2024 while Missouri K-12 public educators were still in session. The timeline allowed a 2-week window for respondents to complete the survey, followed with an email reminder of an additional 1-week window to nonrespondents of districts who granted permission. The data from Google Forms were downloaded into Microsoft Excel for cleaning and entry into SPSS. Data will be kept by the researcher on secured drive for 3 years, and then destroyed.

## Data Analysis

Analysis of the survey began with data cleaning. Duplicate responses were removed along with incomplete surveys. Demographic information was collected and analyzed to determine if there were any other statistically significant differences between the groups studied. The question asking participants if their district had a teacher concealed carry policy or not were aggregated to identify whether a difference of safety perception existed between the two groups. The demographics and perceptions of school safety sections were calculated using descriptive statistics to identify the overall sample of each group. The researcher included 140 and excluded 261 participants.

The Independent samples  $t$  test was selected for this study. Independent samples  $t$ -tests are inferential statistical tests that determine whether there is a statistically significant difference between two unrelated groups (Laerd Statistics, 2024). There were six assumptions for each  $t$ -test that needed to be met for valid results. The first assumption was that the dependent variable would be measured on a continuous scale. This study used the Likert scale, which assumed that the difference between points on the scale were all equal. The second assumption was that there were two categorically independent groups. For this study, one group had a teacher concealed carry policy in their district and the other group did not. The third assumption was independence of observation, or the difference in makeup of the two groups. The third assumption was met as the survey was sent out to two groups of Missouri K-12 public schools; those that had teacher concealed policy and those that did not.

The fourth assumption was the absence of statistical outliers, which were data points that significantly differed from the other sets of data leading to disproportionality

within the results. For this study, data were reviewed for statistical outliers. Outliers were discovered in Research Question 2 and Research Question 3. The researcher chose to keep the outliers in each construct as it was believed that the results would not be significantly affected due to each of the outliers being within 1.5 box-lengths from the edge of the box classified by SPSS. The fifth assumption was that the dependent variable should be normally distributed for each group of the independent variable. The Shapiro-Wilk test for normality was used to ensure the significance value was above 0.05 for the data to be considered normal. For this study, the Shapiro-Wilk test determined normal distribution for Research Question 1 and Research Question 2, but not for Research Question 3. The researcher decided to continue with the  $t$  test anyway as statistics are reasonably robust against non-normal distributions. The sixth and final assumption used Levene's test of equality of variances to determine if a  $p$ -value greater than 0.05 was present to ensure homogeneity of variance. If the  $p$ -value was less than 0.05 the assumption of homogeneity of variance was violated (Laerd Statistics, 2024). After running Levene's test for homogeneity of variance the researcher determined that Research Question 1 and Research Question 2 had equality of variance, while Research Question 3 had unequal variance.

For this study, the independent samples  $t$  test required the setup of independent and dependent variables within SPSS. Within SPSS two groups were created for analysis: those who had a teacher concealed carry policy and those that did not. Dependent test variables and ordinal data based on Likert scale numbers within the survey were input into SPSS as well. Once data were input, they were analyzed to compare means through independent samples  $t$  tests. Dependent variables were placed into the test variable

section and independent variables into the grouping variable section. Those with a teacher concealed carry policies were coded as 1 and those without a teacher concealed carry policy were coded as 2 within the categorical independent variables value box (Faul et al., 2007; 2009).

### **Summary**

The researcher sought to study K-12 public educator perceptions of safety in schools that had teacher concealed carry policies and those that did not. The study needed 102 responses to satisfy the randomness test, 51 from one group and 51 from the other. The research setting was Missouri K-12 public schools. Descriptive statistics were applied to quantify general perceptions of school safety, application of school safety measures, experiences of firearms at school, and support of teacher concealed carry policies in this quantitative study. The Teacher Perspectives on School Safety and Guns in School survey (Wood & Hampton, 2022) was modified by the researcher (Appendix B) with permission from Dr. Wood (Appendix A). Data were analyzed using SPSS. Independent samples *t* tests were conducted for each of the three null hypotheses to determine any statistically significant differences between the two groups studied. Chapter Four contains the results of the data collected via survey and an analysis of the findings. Chapter Five concludes with a summary of the findings and recommendations for further research.

## CHAPTER FOUR

### FINDINGS

#### Introduction

Active shooting situations in schools have escalated since 2020, reigniting the debate of gun control and concealed carry (Riedman, 2022). Currently, limited research exists on educator perceptions regarding this topic. Research conducted found varied support for teacher concealed carry based on the hypothetical implementation by students (Shamsrad et al., 2021), educators (Wood & Hampton, 2022), administrators, and the public. The purpose of this quantitative, causal-comparative study was to examine the perceptions of safety among K-12 teachers in schools that had implemented SPO programs and thus allowed staff to concealed carry, and those that had not. This study sought to close the gap in research regarding K-12 public educator perceptions of safety – in schools that had teacher concealed carry policies and those that did not. Understanding how educators perceive their safety of adopted policies allowing educators to carry guns on campus is critical as more states and school districts implement this strategy.

#### Research Questions

RQ1: What are the differences in educators' perceptions of **general safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School?

RQ2: What are the differences in educators' perceptions of **their safety** in public K-12 schools that have implemented School Protection Officer concealed carry

policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher's Perspectives of School Safety and Guns in School?

RQ3: What are the differences in educators' perceptions of safety in public K-12 schools that allow educators to use concealed carry and those that only allow administrators to carry as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School?

### **Null Hypotheses**

H<sub>01</sub>: There is no statistically significant difference in educators' perceptions of **general safety** in K-12 public schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

H<sub>02</sub>: There is no statistically significant difference in educators' perceptions of **their safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

H<sub>03</sub>: There is no statistically significant difference in educators' perceptions of safety in public K-12 schools that allow educators to concealed carry and those that only allow administrators to carry as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

## Validity and Reliability

The suitability of the PCA process was assessed prior to the analysis of the modified version of Wood and Hampton’s (2022) Teacher Perspectives of School Safety and Guns in School survey pilot. The analysis was run on 13 Likert scale questions. The correlation matrix showed there was no correlation. The overall Kaiser-Meyer-Olkin measure was .756, classification of “middling” (Laerd Statistics, 2024). Bartlett’s test of sphericity was statistically significant ( $p < 0.001$ ), indicating the data were factorizable. The K-12 public educators’ perceptions of safety factor analysis is presented in Table 1.

**Table 1**

*K-12 Public Educators’ Perceptions of Safety Factor Analysis Matrix*

Factor Test	Value
Kaiser-Meyer-Olkin	.756
Bartlett’s Test of Sphericity	< 0.001

The PCA process revealed three components that had eigenvalues greater than 1, which explained 33.9%, 27.1%, and 8.9% of the total variance, respectively. The interpretation of data was consistent with the Teacher Perspectives of School Safety and Guns in School survey, which was designed to measure educators' perceptions of general safety of teacher concealed carry policies on Component 1, educators' perceptions of their safety on campuses that allowed teacher concealed carry versus those that did not on Component 2, and educators' perceptions of safety in public K-12 schools that allowed teachers to use concealed carry and those that only allowed administrators to carry on Component 3. Table 2 shows the Cronbach’s alpha for educators’ perceptions of general safety and individual safety above the acceptable value of 0.7. The Cronbach’s alpha for educators’ perceptions of safety for teacher concealed carry versus administrator fell

below the accepted value of 0.7. Reliability measure was below the acceptable value.

Table 3 shows the component correlation matrix with varimax rotation for each of the components.

**Table 2**

*K-12 Public Educators' Perceptions of Safety Reliability Statistics Matrix*

Component	Value	Number of Items
General safety	0.9	5
Individual safety	0.8	5
Admin only vs. educator carry	0.6	3

**Table 3**

*Rotated Structure Matrix for PCA with Varimax Rotation*

Items	Rotated Component Coefficients		
	Component 1	Component 2	Component 3
Qu13	.89		
Qu15	.85		
Qu16	.81		
Qu14	.79		
Qu8	.78	-.45	
Qu2		.89	
Qu1		.85	
Qu5		.65	-.33
Qu4		.65	
Qu6		.63	.35
Qu10	.36		.69
Qu12	.66		.66
Qu9	-.31	.47	.58

### **Descriptive Statistics**

The researcher collected a sampling of responses through a survey that was distributed to Missouri superintendents who consented to their district's participation.

Upon consent the survey link was sent for distribution by the district's superintendent to

their staff with a 2-week window of completion if individual participant consent was given. Once the survey window was closed, data were downloaded in Microsoft Excel to clean up prior to entering into SPSS.

### ***Sample***

The researcher collected 401 responses from the survey. Participant responses were dismissed if they did not answer all the questions in the survey, if they did not define their role as a teacher or administrator, and if they did not know whether they had a teacher concealed carry policy in their district. After the initial dismissal process, 294 participants remained. Out of the 294 participants, 140 were randomly selected from those with a policy and those without a policy by a number table randomizer to create a group of 70 participants who did not have a teacher concealed carry policy, and 70 participants who had a teacher concealed carry policy within their district to run the independent samples  $t$  test. Due to the number of participants remaining after the dismissal process a group of 70 was randomly selected from those who had a concealed carry policy.

### ***Demographics***

The researcher used the publicly available Missouri School Directory from the DESE website to send 497 requests for consent to public district superintendents. Consent was granted by 29 superintendents who then distributed the survey to their educators. Due to the anonymity of the survey, it is unclear how many educators responded from each consenting district. After data cleaning, the survey was completed by 294 public educators in Missouri. The results of all remaining participants included 70% females, 28% males, and 2% of participants who preferred not to disclose their gender. The racial makeup of participants in the study included 97% White/Caucasian and 3% who

preferred not to disclose. Out of the 294 participants, 83% identified as teachers and 17% as administrators. Political affiliations of participants included 40% Republican, 24% did not identify with a political party, 14% preferred not to disclose, 10% Independent, 10% Democrat, and 2% other political affiliation. The educational experience of respondents was 24% 1 to 5 years, 18% 6 to 10 years, 16% 11 to 15 years, 15% 16 to 20 years, and 27% more than 20 years as seen in Table 4.

**Table 4**

*K-12 Public Educator Demographics*

Gender	% of Respondents
Female	70%
Male	28%
Preferred not to disclose	2%
Educator Role	
Administrator	17%
Teacher	83%
Race/Ethnicity	
White/Caucasian	97%
Preferred not to disclose	3%
Political Affiliation	
Republican	40%
Do not identify with a party	24%
Preferred not to disclose	14%
Independent	10%
Democrat	10%
Other	2%
Educator Years of Service	
1 to 5 Years	24%
6 to 10 Years	18%
11 to 15 Years	16%
16 to 20 Years	15%
More than 20 Years	27%

Participants responded that 48% worked in schools of 1 to 400 students, 42% in schools of 401 to 800 students, 5% in schools of 801 to 1200 students, and 5% in schools with more than 1200 students. The school settings of participants included 87% rural, 10% suburban, and 2% were unsure how to classify their setting. Educational building levels served by participants were 3% early childhood, 35% elementary, 11% intermediate, 38% secondary or high school, and 14% district-wide as seen in Table 5.

**Table 5**

*Participants' School Demographics*

Size of School	% of Respondents
1 to 400	48%
401 to 800	42%
801 to 1200	5%
More than 1200	5%
School Setting	% of Respondents
Rural	87%
Suburban	10%
Unsure	2%
Building Level of Respondents	% of Respondents
Early Childhood	3%
Elementary	35%
Intermediate	11%
Secondary/High School	38%
District-Wide	14%

When participants were surveyed about specific school safety measures four questions had nearly unanimous responses. When asked if their school had metal detectors 99% responded no. When asked if visitors were required to sign in 97% responded yes. When asked if their school had a surveillance system 99% responded yes. When asked if their schools' doors were locked during school hours to control access to the building 99% responded yes. Other general safety questions had mixed responses.

Survey respondents indicated that 84% conducted Missouri state-mandated active shooter drills while 16% did not or were unsure. Only 32% of respondents reported their school had fences around their premises, 55% reported their school required faculty to wear photo identification during school hours, 16% had scanning wands at their school, 5% conducted random backpack searches, and 13% conducted random student locker searches. An SRO or regular police presence was indicated by 62% of participants. Lastly, the dependent variable of the study was whether the school had a teacher concealed carry policy in their school. Out of the 294 participants 29% responded as having an SPO teacher concealed carry policy in their district while 71% did not. Security measure percentages by respondent are seen in Table 6.

**Table 6**

*Participants' Demographic Information – Campus Security Measures*

Security Measure	% Yes	% No
Surveillance system	99%	1%
Locked campus doors	99%	1%
Visitor sign-in	97%	3%
Run active shooter drills	84%	16%
SRO/Police presence	62%	38%
Staff ID badges required	55%	45%
SPO program	29%	71%
Metal detector scanning wands	16%	84%
Fences around premises	32%	68%
Random locker searches	13%	83%
Random backpack searches	5%	95%
Metal detectors	1%	99%

**Data Analysis and Findings**

After the completion of the PCA process the modified Teacher Perspectives of School Safety and Guns in School survey was sent to public K-12 school superintendents in Missouri. With permission from the superintendent, the survey was distributed to

educators with a 2-week window of completion. Once the survey window was closed, data were again downloaded in Microsoft Excel for data cleaning prior to entering into SPSS. Data cleaning consisted of removing participants with incomplete surveys. Data were then entered into SPSS and three independent samples *t* tests were conducted for analysis. A group statistics table was provided by SPSS that included the mean, standard deviation, and standard error mean for each construct. The independent sample *t* test was used to compare the means in perceptions of safety in K-12 educators in schools with a teacher concealed carry policy and schools without a policy regarding general safety, individual safety, and administrator only versus teacher carry. The independent sample *t* test assisted the researcher in testing the reliability of data by analyzing the variance between the two groups.

There were six assumptions that needed to be met for the results to be considered valid in SPSS statistics. The dependent variable measurements occurred on a continuous scale (i.e., Likert scale 1-6). The independent variables included two groups, educators with a teacher concealed carry policy, and those without a policy. The fourth assumption was the absence of statistical outliers, which were data points that significantly differed from the other sets of data leading to disproportionality within the results. For this study, data were reviewed for statistical outliers. Outliers were discovered in Research Question 2 and Research Question 3. The researcher chose to keep the outliers in each construct as it was believed that the results would not be significantly affected due to each of the outliers being within 1.5 box-lengths from the edge of the box classified by SPSS.

The fifth assumption was that the dependent variable should be normally distributed for each group of the independent variable. The Shapiro-Wilk test for

normality was used to ensure the significance value was above 0.05 for the data to be considered normal. For this study, the Shapiro-Wilk test determined normal distribution for Research Question 1 and Research Question 2, but not for Research Question 3. The researcher decided to continue with the *t* test anyway as statistics were reasonably robust against non-normal distributions. The sixth and final assumption used Levene's test of equality of variances to determine if a *p*-value greater than 0.05 was present to ensure homogeneity of variance. If the *p*-value was less than 0.05 the assumption of homogeneity of variance was violated (Laerd Statistics, 2024). After running Levene's test for homogeneity of variance the researcher determined that Research Question 1 and Research Question 2 had equality of variance, while Research Question 3 had unequal variance.

Following the SPSS independent sample *t* test analysis, the researcher reported the differences in the means of the independent variables, educators with a teacher concealed carry policy and those without, based on their responses in three areas: perception of general safety, perception of individual safety, and perception of safety in a school with administrator only concealed carry policy versus schools that allowed both teachers and administrators to concealed carry. Cohen's *d* was calculated to determine standardized differences between the means. Interpretation of Cohen's *d* can be interpreted using the effect size of 0.2 as a small effect, 0.5 as a medium effect, and 0.8 as a large effect (Faul et al., 2007; 2009).

Three null hypotheses were tested using three constructs as verified through the PCA process and Cronbach's alpha. The *p*-value of each independent samples *t* test was calculated to determine if the null hypothesis of the three research questions were rejected

with a maximum alpha level of 0.5. The independent samples *t* test examined whether a statistically significant difference was found between schools that had a teacher concealed carry policy versus those that did not regarding educators' perception of general safety, individual safety, and administrator only versus teacher carry policies. If there was a significant difference between the two groups, the significance value of the two-tailed test would be less than 0.5.

## **Findings**

The independent sample *t* test was used to analyze the three research questions. There were 140 randomly selected valid responses from educators across the state of Missouri regarding their perceptions of safety and teacher concealed carry policies. The independent samples *t* test examined whether a statistically significant difference was found between schools that had a teacher concealed carry policy versus those that did not regarding educators' perception of general safety, individual safety, and administrator only versus teacher carry policies.

### ***Research Question 1***

What are the differences in educators' perceptions of **general safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School?

### ***Null Hypothesis 1***

There is no statistically significant difference in educators' perceptions of **general safety** in K-12 public schools that have implemented School Protection Officer concealed

carry policies and those that have not as measured by the modified version of Wood and Hampton’s (2022) Teacher Perspectives of School Safety and Guns in School.

Table 7 presents the mean and standard deviation for the educators’ perceptions of general safety in public K-12 schools that had implemented SPO concealed carry policies and those that had not.

**Table 7**

*K-12 Public Educators’ Perceptions of General Safety*

		<i>N</i>	<i>M</i>	<i>SD</i>	Standard Error Mean
General Safety	No Policy	70	20.2	7.8	0.9
	Yes Policy	70	16.6	7.5	0.9

The perception of general safety mean for educators that did not have a teacher concealed carry policy ( $M = 20.2, SD = 7.8$ ) was higher than those who had a policy ( $M = 16.6, SD = 7.5$ ). Levene’s test for equality of variance was tested and with a significance output greater than .05 indicated a homogeneity of variance within the groups was assumed ( $p = .50$ ) and there were no statistical differences in variance between the groups. There was a statistically significant ( $p < .05$ ) difference in perceptions of general safety scores between educators that had a teacher concealed carry policy and those without. Those without a policy scored higher than those that did,  $M = 20.2, 95\% CI [1.0, 6.1], t(138) = 2.74, p = .007$  as shown in Table 8.

**Table 8**

*Independent Samples Test for Perceptions of General Safety*

*t*-test for Equality of Means

		Significance				95% CI	
General Safety	<i>t</i>	<i>df</i>	Two-sided <i>p</i>	<i>M</i> diff.	<i>SD</i>	<i>LL</i>	<i>UL</i>
	2.74	138	.007	3.56	1.30	0.99	6.12

There were statistically significant differences between means ( $p < .05$ ) as seen in the two-sided  $p$ -value, and therefore, the null hypothesis was rejected. A medium effect size existed with Cohen's  $d = 0.46$ .

**Research Question 2**

What are the differences in educators' perceptions of **their safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher's Perspectives of School Safety and Guns in School?

**Null Hypothesis 2**

There is no statistically significant difference in educators' perceptions of **their safety** in public K-12 schools that have implemented School Protection Officer concealed carry policies and those that have not as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School.

Table 9 presents the mean and standard deviation for the educators' perception of individual safety in public K-12 schools that had implemented SPO concealed carry policies and those that had not.

**Table 9**

*K-12 Public Educators' Perceptions of Individual Safety*

		<i>N</i>	<i>M</i>	<i>SD</i>	Standard Error Mean
Individual Safety	No Policy	70	13.1	4.82	0.56
	Yes Policy	70	13.4	4.87	0.58

The perception of individual safety mean for educators that did have a teacher concealed carry policy ( $M = 13.4, SD = 4.87$ ) was higher than those who did not ( $M = 13.1, SD = 4.82$ ). Levene's test for equality of variance was tested and with a significance output

greater than .05 indicated a homogeneity of variance within the groups was assumed ( $p = .963$ ) and there were no statistical differences in variance between the groups. There was no statistically significant ( $p > .05$ ) difference in perceptions of individual safety scores between educators that had a teacher concealed carry policy and those that did not, with those that did scoring higher than those that did not,  $M = 13.4$ , 95% CI [-2.0, 1.3],  $t(138) = -0.44$ ,  $p = .33$  as shown in Table 10.

**Table 10**

*Independent Samples Test for Perceptions of Individual Safety*  
*t-test for Equality of Means*

		Significance			95% CI		
Individual Safety	<i>t</i>	<i>df</i>	Two-sided <i>p</i>	<i>M</i> diff.	<i>SD</i>	<i>LL</i>	<i>UL</i>
	-0.44	138	.663	-0.36	0.82	-2.0	1.3

There were no statistically significant differences between means ( $p < .05$ ) as seen in the two-sided  $p$ -value, and therefore the researcher failed to reject the null hypothesis. A small effect size existed with Cohen's  $d = -0.07$ .

***Research Question 3***

What are the differences in educators' perceptions of safety in public K-12 schools that allow educators to use concealed carry and those that only allow administrators to carry as measured by the modified version of Wood and Hampton's (2022) Teacher Perspectives of School Safety and Guns in School?

***Null Hypothesis 3***

There is no statistically significant difference in educators' perceptions of safety in public K-12 schools that allow educators to concealed carry and those that only allow

administrators to carry as measured by the modified version of Wood and Hampton’s (2022) Teacher Perspectives of School Safety and Guns in School.

Table 11 presents the mean and standard deviation for the educators’ perceptions of safety, regarding educator versus administrator only carry in public schools that had implemented SPO concealed carry policies and those that had not.

**Table 11**

*K-12 Public Educators’ Perceptions of Educator Versus Admin Only Carry*

		<i>N</i>	<i>M</i>	<i>SD</i>	Standard Error Mean
Educator vs. Admin Only Carry	No Policy	70	11.4	4.7	0.56
	Yes Policy	70	9.0	3.6	0.43

The perception of safety regarding educator versus administrator only concealed carry mean for those that did not have a teacher concealed carry policy ( $M = 11.4, SD = 4.7$ ) was higher than those who had a policy ( $M = 9.0, SD = 3.6$ ). Levene’s test for equality of variance was used and with a significance output greater than .05 indicated an unequal variance between the groups. Homogeneity of variance within the groups was assumed ( $p < .001$ ) and there were statistical differences in variance between the groups. There was a statistically significant ( $p < .05$ ) difference in perceptions of educator versus administrator only carry scores between educators that had a teacher concealed carry policy and those that did not, with those that did not scoring higher than those that did,  $M = 11.4, 95\% CI [1.0, 3.8], t(129) = 3.4, p < .001$  as shown in Table 12.

**Table 12**

*Independent Samples Test for Perceptions of Educator Versus Admin Only Carry*  
*t-test for Equality of Means*

		Significance			95% CI		
Educator vs Admin Only Carry	<i>t</i>	<i>df</i>	Two-sided <i>p</i>	<i>M</i> diff.	<i>SD</i>	<i>LL</i>	<i>UL</i>
	3.4	129	< .001	2.4	0.71	1.0	3.8

There were statistically significant differences between means ( $p < .05$ ) as seen in the two-tailed  $p$ -value, and therefore, the null hypothesis was rejected. A medium effect size existed with Cohen's  $d = .574$ .

**Summary**

The statistical analysis and findings of this study explored the differences in K-12 public educator perceptions of safety in schools that had teacher concealed carry policies and those that did not. The three research questions were explored, data were collected, and analysis completed. After examination, two of the three null hypotheses were rejected as statistical differences appeared between those who had a teacher concealed carry policy and those that did not in their perceptions of general safety and administrator only concealed carry policy versus schools that allowed both teachers and administrators to concealed carry. The null hypothesis failed to be rejected and no statistically significant differences were found in educators' perceptions of individual safety for those who had a teacher concealed carry policy and those without.

Chapter Four included the sampling, demographics, data cleaning, research questions, null hypotheses, data analysis, findings, and results. Chapter Five presents an in-depth interpretation, analysis, and synthesis of the findings, along with recommendations for future research.

## **CHAPTER FIVE**

### **CONCLUSION**

#### **Introduction**

Teacher concealed carry continues to increase in application as a means to stop or deter active shooters in schools across the country. Post-Columbine, 189 student and staff lives have been lost due to active shootings in K-12 public schools, and more lives continue to be lost each year (Riedman, 2022; Spitzer, 2022). Addressing this issue has been at the forefront of state and federal legislation efforts for years. Despite large investments in security measures in schools, fear of active shooter situations continues to grow (Weiler et al., 2021). The purpose of this study was to examine the perceptions of safety among K-12 educators in schools that had implemented a teacher concealed carry program compared to those that had not. Chapter Five included an in-depth interpretation, analysis and synthesis of the findings in relation to the research questions, as well as the implications of this study to the field of education and recommendations for future research. The survey results determined there was a statistically significant difference between educators with a teacher concealed carry policy in their school and those without in the areas of general safety and educator versus administrator only concealed carry. Throughout the discussion of findings, the researcher used the term educators to indicate the group including both teachers and administrators, and “only administrators” when referencing the group without teachers.

#### **Summary of Findings**

The purpose of this quantitative, causal-comparative study was to examine the perceptions of safety among K-12 teachers in schools that had implemented SPO

programs and thus allowed staff to concealed carry, and those that had not. The researcher looked specifically at three components: perception of general safety, perception of individual safety, and educator versus administrator only concealed carry. The researcher, with permission, modified the original Teacher Perspectives on School Safety and Guns in School survey (Wood & Hampton, 2022), which measured the perception of safety by K-12 educators. Reliability and validity of the original Teacher Perspectives on School Safety and Guns in School survey were unknown and data were not able to be shared. Therefore, as a part of this study, a pilot was given to a sampling of K-12 public educators in two Southwest Missouri rural school districts, one with a teacher concealed carry policy and one without, to calculate the reliability and validity of the modified Teacher Perspectives on School Safety and Guns in School survey. The analysis was run on 13 Likert scale questions. The correlation matrix showed there was no correlation. The overall Kaiser-Meyer-Olkin measure was .756, classification of “middling” (Laerd Statistics, 2024). Bartlett’s test of sphericity was statistically significant ( $p < 0.001$ ), indicating the data were factorizable. The PCA process was completed, three components were kept, and the survey passed for reliability and validity.

In the spring of 2024, emails were sent out to 497 Missouri school superintendents requesting consent for their staff to participate in the study. Once the 2-week time frame allotted for the survey completion elapsed, data were collected, cleaned, and analyzed. Participant responses were eliminated if they did not answer all the questions in the survey, if they did not define their role as a teacher or administrator, and if they did not know whether they had a teacher concealed carry policy in their district. After the initial dismissal process, 294 participants remained. Due to a lower number of respondents with

a concealed carry policy, 140 participants were randomly selected from those with a policy and those without a policy using a number table randomizer. This created a group of 70 participants who did not have a teacher concealed carry policy, and 70 participants who had a teacher concealed carry policy within their district to run the independent samples *t* test. Independent samples *t* tests were used to analyze data to compare differences in the means in perceptions of safety of those with a teacher concealed carry policy and those that did not.

### ***RQ1 Findings: Perceptions of General Safety***

This question sought to determine differences between K-12 educators with a teacher concealed carry policy and those without, in their perceptions of general safety. An Independent-Sample *t*-test was run and a statistically significant difference was found between the groups. The perception of general mean for those without a policy ( $M = 20.2$ ,  $SD = 7.8$ ) was greater than those with a policy ( $M = 16.6$ ,  $SD = 7.5$ ). Levene's test for equality of variance indicated equal variance and Cohen's *d* indicated a medium effect size. Lazarus's (1966) cognitive appraisal theory describes how an individual perceives safety in relation to their environment and the potential for harm. Rogers's (1975) protection motivation theory, the primary basis for the research, explores an individual's response efficacy or need to put safety measures in place to reduce or eliminate harm. The results of this research question seemed to indicate K-12 educators perceived they were generally safer in a setting without a teacher concealed carry policy. Due to the low risk for potential harm, educators noted that a measure such as teacher concealed carry is not necessary to reduce or eliminate school shootings.

### ***RQ2 Findings: Perceptions of Individual Safety***

This question sought to determine differences between K-12 educators with a teacher concealed carry policy and those without, in their perception of individual safety. An Independent-Sample *t*-test was run and no statistically significant difference was found between the groups. The perception of safety mean for those with a policy ( $M = 13.4$ ,  $SD = 4.87$ ) was greater than those without a policy ( $M = 13.1$ ,  $SD = 4.82$ ). Levene's test for equality of variance indicated equal variance. Cohen's *d* indicated a small effect size and that individual safety was not a focal point in their perception of safety regarding teacher concealed carry. The results of this research question seemed to indicate that K-12 educators felt slightly safer regarding their own safety regardless of whether or not there was a concealed carry policy. Due to the neutral perception, educators suggested that a measure such as teacher concealed carry does not impact their self-efficacy, or an individual's belief that their behavior could reduce the threat of harm (Rogers, 1975).

### ***RQ3 Findings: Educator Versus Administrator Only Concealed Carry***

This question sought to determine differences between K-12 educators with a teacher concealed carry policy and those without, in their perception of safety regarding educator versus administrator only concealed carry. Cronbach's alpha was run with data showing a lower than acceptable reliability score. The researcher chose to go forward with running an Independent-Sample *t*-test and a statistically significant difference was found between the groups. The perception of safety mean for those without a policy ( $M = 11.4$ ,  $SD = 4.7$ ) was greater than those with a policy ( $M = 9.0$ ,  $SD = 3.6$ ). Levene's test for equality of variance indicated unequal variance and Cohen's *d* indicated a medium effect size. According to Lazarus's (1966) cognitive appraisal theory and Rogers's (1975)

protection motivation theory, both experiences and resources dictate the response one has to protect themselves in their current environment. In this study, educators had limitations in flexibility based on experiences and the supervision of students. They also were limited in time, a valuable resource in an educational environment, to train and respond to an active threat situation. Those without a teacher concealed carry policy indicated a higher perception of safety when only administrators were allowed to carry versus all educators.

## **Discussion**

Addressing student safety in public K-12 schools regarding active shooters has continued to be at the forefront of conversations nationwide. Since the Columbine High School shooting in 1999, shootings have occurred across the country with evolving tactics and speed. Teacher concealed carry legislation has been approved by several states as a mechanism to stop or deter such shootings from happening in hopes of saving lives. School boards and communities within states that allow teacher concealed carry policies are left to decide whether it creates a safer environment for students and staff (DeMitchell & Rath, 2019; Martaindale & Schildkraut, 2022).

The choice for school districts to implement a teacher concealed carry policy is solely based on the community and its security needs. In the last 23 years, legislators and schools have invested millions of dollars into increased infrastructure such as monitored security cameras, entry enhancements and protocols, bullet-resistant film, and steam vent systems. School concealed carry programs have been around for the last several decades but have grown significantly in the last several years (Martaindale & Schildkraut, 2022; McCuddy et al., 2022; Spitzer, 2022; Wood & Hampton, 2021, 2022). Security needs are

based on the district's perception of perceived threat vulnerability and their expectations of the significance and outcome of an event (Lazarus, 1966; Rogers, 1975). The choice to implement a policy of teacher concealed carry is the result of the district's motivational dispositions, values, predictability, controllability, and imminence of a potential stressful event (Krohne, 2001). In the case of this study, the perception of safety was affected by an individual's fear of becoming a victim of an active shooting event. Some individuals had a higher perception of safety if they were able to carry a concealed weapon in order to defend themselves and other students around them.

Examining the initial limitations proposed, the researcher identified other limitations that may have affected the data. Research Question 3 had a Cronbach's alpha lower than the acceptable range, indicating the results may not be reliable. Research Question 3 also had unequal variance with several outliers in the box plot data, which may have been due to the limited amount of questions in the construct. Despite a large number of returned surveys, valid data were returned by predominantly White, female, rural educators, which did not provide diversity. Lastly, the bias of the researcher's background and training in school safety was addressed by reviewing a journal of bias developed prior to the study. The journal was reviewed so that it would not affect the interpretation of data, formulation of conclusions, and future recommendations.

### ***Perceptions of General Safety***

Educators who worked in schools that did not have a teacher concealed carry policy felt generally safer than educators in schools that did have a policy. These data align with previous research conducted that found a lack of support for teacher concealed carry policies, where a majority of educators perceived the introduction of firearms

would be detrimental to the overall safety of the building (Anthony, 2021; Wood & Hampton, 2022). Other studies based on the hypothetical implementation by students (Shamsrad et al., 2021), educators (Wood & Hampton, 2022), administrators, and the public also support the findings of this study. The results of the study were not what the researcher expected based on the increased implementation of teacher concealed carry policies within the state, along with the Findley's (2014) localized study, which indicated stronger support for such a policy in rural districts. With 87% of respondents in this study being employed by rural school districts, the researcher believed a larger percentage would have perceived teacher concealed carry more favorably as a means to deter an active threat. The results of the study suggest educators feel generally safer in districts that do not have a concealed carry policy, seemingly indicating the protective practices they have implemented within their district are sufficient enough to reduce the stressor and perceived potential threat of an active shooter. Thus, educators do not believe a teacher concealed carry policy is necessary to stop or deter a threat (Rogers & Prentice-Dunn, 1997).

Other prior quantitative research aligned with the study, citing educators had expressed concerns with the perceived safety risks and oversight of implementing a concealed carry policy. Training requirements, confusion for law enforcement responders perceiving teachers who carry as threats, and the impact on the educational environment were all cited as areas that educators perceived as safety risks with such a policy (Anthony, 2021; Pyo, 2020; Scudder, 2021; Winston, 2016). Additionally, administrators in prior studies also expressed hesitancy in implementing teacher concealed carry policies, citing liabilities with proper storage, accidental discharges, and continuous

qualification standards as issues (Pyo, 2020; Scudder, 2021; Weiler et al., 2021). This study did not use hypothetical implementation, but actual educators who either had or did not have a policy in place within their respective district. Insight from prior larger quantitative and qualitative studies regarding teacher concealed carry aligned with the perceptions of general safety in this study (Anthony, 2021; DeMitchell & Rath, 2019; Irwin et al., 2023; Pyo, 2020; Scudder, 2021; Shamserad et al., 2021; Weiler et al., 2021; Wood & Hampton, 2022; Yacek, 2018).

Furthermore, the data strongly suggest that those without a policy do not believe teachers should carry a gun at school, that gun restrictions help make schools safer, and that gun-free school zones do not create vulnerability. Results of the study are again supported by previously conducted quantitative and qualitative research where respondents felt unsafe with the prospect of armed colleagues in their schools and that arming staff would escalate fear and tension in ways adverse to learning, preferring alternative strategies to prevent school violence (DeMitchell & Rath, 2019; Irwin et al., 2023; Yacek, 2018). Demographic safety questions were asked to determine what alternative strategies were being implemented to prevent school violence. The researcher expected to see a higher level of alternative practices implemented by those without a teacher concealed carry policy. Contrary to the assumption, those who responded “no” to having a teacher concealed carry policy had the same, if not fewer, alternative strategies implemented than those with a policy.

In school districts across the country, there are consistent alternative strategies implemented to ensure the safety of their students and staff. Physical barriers, visitor sign-in procedures, and search and seizure tactics were a few strategies utilized in an

effort to keep threats out of school buildings. When asked if their school had fencing surrounding their campus, 32% of both groups responded “yes” to having a physical barrier around their campus. Although higher than those with a concealed carry policy, only 55% of respondents of educators without a policy indicated they were required to wear identification badges at school. Only 4% without a policy responded that they did random student backpack checks, 12% did random locker checks, and 12% had metal detector scanning wands. Universally, respondents indicated they did not use metal detectors, but all had security camera systems, kept their exterior campus doors locked through the day, and required visitors to sign in before entry. Lastly, only 54% of those respondents without a policy indicated they had an SRO on campus.

Applying Lazarus’s (1966) cognitive appraisal theory, the data suggest that respondents without a teacher concealed carry policy believed the environment in which they were located did not impose enough psychological stress to warrant firearms on campus. Without a high enough environmental stress during the primary appraisal process, the secondary appraisal cannot occur as the mechanisms applied to stop the stressor, in this case an active threat, was satisfactory. Alternative measures such as secured entrance points, a fenced-in campus perimeter, or strict visitor entry protocol potentially minimized the stress induced by the thought of an active shooter event, thus their perception and appraisal of general safety indicated they were adequately protected. Since the respondent felt adequately protected there was not motivation to implement a strategy such as teacher concealed carry to stop or deter an active shooting threat, thus Rogers’s (1975) protection motivation theories threat appraisal process was never entered. Without a perceived potential for an active shooter event due to safety measures

already in place, there was no need a teacher concealed carry policy, as respondents perceived they were already safe in the environment in which they worked.

### ***Perceptions of Individual Safety***

Data from the study suggested there was no statistical significance between those with a concealed carry policy and those without regarding individual safety. The perception of individual safety statistics included a similar mean between the two groups ( $M = 13.4$  for those with a policy and  $M = 13.1$  for those without) and a  $p$ -value = .33, signifying no statistical significance existed. A small effect size existed with Cohen's  $d = -0.07$ . Although there was not enough statistical data to support a conclusion regarding individuals' perception of safety regarding teacher concealed carry, a possibility existed that there could be a difference between the groups based on their perception of general safety with its medium effect size. The researcher believed there would have been more of a statistical difference between the two groups as the questions aligned more to personal safety, which may have uncovered a stronger sense of bias from the respondents based upon the response to their perception of general safety. It was assumed by the researcher that an individual's perception of safety would be more prominent due to the threat appraisal process, including their self-perceived threat vulnerability, perceived threat severity, and the maladaptive reward of self-protection (Rogers, 1975).

However, data gathered from a demographic question pertaining to individual's willingness to carry a firearm provided some insight into individuals' perceptions of safety. After reviewing the data, a statistic the researcher did not anticipate from those who did not have a policy was the number of educators who indicated they would carry a concealed firearm on campus if given the opportunity, training, and a bonus to do so. The

data contradicted prior research, along with the current study's perceptions of general safety and teacher concealed carry, where the majority did not support any educators carrying a firearm (Wood & Hampton, 2022). Out of the 189 respondents without a concealed carry policy, 41% indicated they would consider carrying at school with a bonus. Contrary to prior literature, 70% of those who responded were female, showing a higher willingness to carry a firearm at school than prior studies (Findley, 2014; Olive, 2019; Pacheco, 2022; Scudder, 2021; Winston, 2016; Wood & Hampton, 2022).

Although those without a concealed carry policy had a significantly higher perception of safety, examining their willingness to carry a firearm based on extrinsic motivators should be considered for future research. Responses to the demographic question suggested individuals believe there may be a potential lack of action that would pose a threat to themselves and that carrying a firearm would stop or deter the threat. Applying Rogers's (1975) protection motivation theory, the data suggest respondents' willingness to carry a firearm with extrinsic motivation indicates a level of perceived threat vulnerability leading to an assessment of efficacy and response cost. Applying Lazarus's cognitive appraisal theory, those respondents who would consider carrying a concealed firearm at school may find it a viable option as they work through their secondary appraisal process to mitigate the psychological stress of a potential active threat situation. If a higher number of individuals consider carrying a firearm, it could be an indication of a growing level of self-efficacy, in that they can perform the behavior necessary to reduce or stop the threat of harm (Lazarus, 1966; Rogers 1975). Despite the researcher's initial assumptions and the answers to the demographic question that

indicated some individuals may support a concealed carry policy for their own perception of individual safety, the study did not have enough evidence to reject the null hypothesis.

### ***Administrator Only Versus Teacher Concealed Carry***

Although data from this study suggest there is a statistically significant difference between those with a concealed carry policy and those without regarding perceived safety of educator versus administrator only concealed carry, the results must be taken with caution. Despite a low reliability score and outliers, the conducting of the independent samples *t* test was completed by the researcher due to the statistics being reasonably robust against non-normal distributions. For this component educators without a policy had a slightly higher perception of safety mean score ( $M = 11.4$ ) indicating they did not feel safe with teachers or other personnel carrying a firearm, and that the 120 hours of training may not be sufficient. Those with a policy fell at the component mean ( $M = 9$ ), indicating they were neutral regarding teacher concealed carry along with other personnel, and believe the 120-hour training may or may not be adequate. Those with and without a teacher concealed carry policy suggest skepticism that the training requirements were adequate. This aligned with prior research where it was found that educators had significant reservations regarding the carrying of concealed firearms due to the challenges of establishing rigorous qualification guidelines, difficulties of proper scenario training, and doubts of effective response compared to a dedicated school resource officer (Pyo, 2020; Scudder, 2021; Somers et al., 2020; Stock, 2022).

The outcome of the study regarding educator versus administrator only concealed carry aligned with the researcher's initial thoughts. The researcher's initial background in school safety training and experience as an educator influenced the initial assumption that

there would be a difference. Prior qualitative research supports the outcome of the study citing educators' concern that carrying a concealed firearm would elevate the risk of accidental discharge, negatively impact the educational environment, and escalate fear within the classroom. Further concerns included the challenges of developing and finding time for training and oversight of such a policy (Anthony, 2021; DeMitchell & Rath, 2019; Irwin et al., 2023; Scudder, 2021; Winston, 2016; Wood & Hampton, 2022; Yacek, 2018). Educators have limitations in flexibility and the resource of time, which could inhibit both training and proper response in an active shooter situation. The limitation of flexibility is due to class scheduling and the responsibility to monitor groups of students at specific times throughout the day. Educators lack flexibility to respond to a situation as their duty is the safety of the students in their classroom during an emergency. The limitation of resources such as time is due to already exhaustive requirements of educators in curriculum, behavior management, and state testing (DeMitchell & Rath, 2019; Irwin et al., 2023; Yacek, 2018). Further requirements to take a 120-hour training course and keeping up with legislative firearm qualifying requirements to continue to carry in school may cause further limitations of time or lapse in training, resulting in improper response to an emergency situation.

Applying Rogers's (1975) protection motivation theory, respondents did not believe a teacher concealed carry policy would be necessary to stop or deter a threat, mimicking the response of the perception of general safety. The data suggest that educators perceive a higher threat vulnerability to having firearms carried by more individuals within the school, and that limiting it to administrators, if a policy were to be implemented, is preferable. The data also suggested that respondents may have a higher

level of psychological stress in an environment where their colleagues carry a concealed weapon (Lazarus, 1966; Rogers, 1975).

Further research of teacher concealed training requirements, effectiveness, and perceived safety outcomes should be conducted. With the rapid expansion of concealed carry policies throughout the United States, more research must be conducted in this area. More insight should be gained beyond the three studies to date that have captured law enforcement perceptions on the issue of teacher concealed carry (Blair et al., 2019; Schildkraut & Martaindale, 2022; Wood & Hampton, 2021). With a growing number of schools across the country implementing concealed carry policies, more perspectives must be gained to ensure data can inform decisions.

### **Professional Implications**

Educators growingly face the possibility of an active shooter situation in their district, leading many districts to implement policies such as teacher concealed carry to stop or deter them from happening. Active threat situations continue to rise and the psychological stress of the potential for such an event greatly impacts the individuals within a school (Riedman, 2022). The implications and perceptions of safety of a teacher concealed carry policy has not been extensively researched. This study presented the perceptions of K-12 educators regarding teacher concealed carry policies. Prior studies have shown a lack of support for teacher concealed carry policies (Anthony, 2021; DeMitchell & Rath, 2019; Irwin et al., 2023; Pyo, 2020; Scudder, 2021; Shamserad et al., 2021; Weiler et al., 2021; Wood & Hampton, 2022; Yacek, 2018). In this study, those without a teacher concealed carry policy perceived they were generally safer than those with a policy. This study also suggested that those with a policy are neutral in their

perception of safety regarding whether educators should be allowed to carry or only administrators, and that the 120-hour training requirement may or may not be sufficient. Those without a policy support only administrators carrying and believe more training should be required. The researcher did not expect these results based on the increase of concealed carry policies in Missouri and previously conducted localized studies, which showed a growing support for such policies (Findley, 2014; Shamsrad et al., 2021; Winston, 2016).

There are many factors that influence perceptions of safety regarding teacher concealed carry. School settings, political demographics, and local law enforcement response times can all impact how educators perceive their safety within a setting that does or does not allow for teachers to conceal a firearm. Prior research suggests schools within rural settings have a much different perception of firearms in school than those in an urban setting (Findley, 2014). Political demographics of school settings also influence the perception of safety regarding teacher concealed carry policy implementation with prior research suggesting conservative-leaning areas are more prone to allow for such policies (Weiler et al., 2021). Although school shootings represent a small percentage of overall mass shootings in America, the impact of losing children cascades throughout the country increasing fear and threat vulnerability in schools (Rogers, 1975). Quick law enforcement response is crucial to stopping these attacks that take place in an average of fewer than 5 minutes, as well as decreasing the perceived threat and fear that comes from mass shootings (Weiler et al., 2021). These policies have shown some support by law enforcement officials due to the potential for a quicker response time by on-site personnel (Mancini et al., 2020; Martaindale & Schildkraut, 2022; Wood & Hampton, 2021).

Active shooting threats continue to occur throughout the country, leaving school leaders in a position to determine if their safety strategies are sufficient to deter or stop an active shooter event from occurring, or if implementing a concealed carry policy would more quickly stop a threat (Riedman, 2022). There is no universal preparation or plan that can prevent an intruder from entering a school and harming people, only strategies of mitigation. School leaders are left to decide what measures are right for their district and community to deter and hopefully prevent such tragedies from occurring on their campus. If a location is 5 minutes or greater response time from local law enforcement, they may decide that a teacher concealed carry policy provides them the means to fight back and potentially save more lives. Consequently, schools that choose not to implement an SPO program or hire an SRO place all of their hope in the physical safety measures and plans in place, along with their local law enforcement agencies' response efficacy.

Both Lazarus's (1966) cognitive appraisal theory and Rogers's (1975) protection motivation theory provided the researcher with an understanding of how people develop their perception of safety in an environment of stressors, and what measures the individual may implore to reach that perceived level of safety. The theories allowed for a consistent and unbiased foundation in which the researcher could view prior research and data from this study. As Lazarus's theory describes, perceptions of safety are based out of an appraisal process that is entered when a psychological stressor is present. Active shootings have increased in frequency and publicity has increased the psychological stress of educators, thus forcing them into an appraisal process more frequently. Although the factors of school setting, political affiliation, and law enforcement response time all influence an individual's assessment of their means of protection, perception of safety

ultimately is determined by the willingness to engage in a behavior that will stop a threat. This study focused on the individual's perception of safety regarding teacher concealed carry to determine if such a policy would reduce the psychological stress surrounding the potential for an active shooter situation (Lazarus, 1966; Rogers 1975). As more states adopt legislation allowing for teacher concealed carry, educators in districts that allow for such policies will be impacted. Educating staff on emergency operating procedures, understanding legal liability for those carrying a weapon, and continuous tactical training with local law enforcement are just a few examples of how an organization may be impacted by the implementation of a concealed carry policy. The results of this study may guide districts through whether they want to pursue the implementation of a concealed carry policy, and whether they want administrators only to carry if a policy is enacted.

### **Recommendations for Future Research**

The purpose of this quantitative, causal-comparative study was to examine the perceptions of safety among K-12 teachers in schools that had implemented SPO programs and thus allowed staff to concealed carry, and those that had not. This study sought to close the gap in research regarding K-12 public educator perceptions of safety in schools that had teacher concealed carry policies and those that did not. Understanding how educators perceive their safety of adopted policies allowing educators to carry guns on campus is critical as more states and school districts implement this strategy. School violence has continued to escalate and schools have a duty to ensure student safety. This study could help inform schools as to whether or not a teacher concealed carry policy

would or would not be beneficial. To continue and improve research in this area, the researcher recommends the following:

1. Replicate this study using a qualitative method to receive more specific feedback from K-12 public educators in the areas of general safety, individual safety, and administrator only versus teacher concealed carry policies. This would allow further insight as to why schools choose to have a policy or not and the reasons for or against it.
2. Replicate this study with private school educators to compare public and private educator perceptions of safety regarding concealed carry.
3. Replicate this study with a focus on school resource officers and compare their perceptions of safety to educator perceptions of safety.
4. Replicate this study with a focus on student perceptions of safety when teachers are allowed to concealed carry.
5. Conduct a study that compares educator perceptions of safety and teacher concealed carry certification program requirements.
6. Conduct a study that compares school shooting metrics between those that have a teacher concealed carry policy and those that do not to determine effects on safety.
7. Conduct a study that examines educators' willingness to carry a firearm based on extrinsic motivators and the impact on perception of safety.
8. Conduct a study to examine what factors impact educators' individual perceptions of safety.

## **Conclusion**

The purpose of this causal-comparative study was to test Lazarus's (1966) cognitive appraisal theory and Rogers (1975) protection motivation theory, comparing the perceptions of safety of public K-12 educators with a concealed carry policy and those without. Currently, limited research exists on educator perceptions regarding this topic. Research that has been conducted found varied support for teacher concealed carry based on the hypothetical implementation by students (Shamserad et al., 2021), educators (Wood & Hampton, 2022), administrators, and the public. The current study sought to fill the gap in literature specific to those schools in Missouri that had implemented or were implementing concealed carry strategies, also known as SPO programming in Missouri, versus those that had not.

This study's data showed a statistically significant difference between educators in schools with a concealed carry policy and those without. Public K-12 educators had a higher perception of general safety in settings that did not have a teacher concealed carry policy. The findings also showed a difference between the perceptions of safety in policies that allowed educators to carry versus only administrators. Those educators without a teacher concealed carry policy perceived it safer to allow only administrators to carry. Lastly, there was no statistical difference between the groups on their perceptions of individual safety regarding a teacher concealed carry policy. These findings are supported by prior quantitative and qualitative research completed, which found a lack of support for teacher concealed carry implementation (Anthony, 2021; DeMitchell & Rath, 2019; Irwin et al., 2023; Pyo, 2020; Scudder, 2021; Shamserad et al., 2021; Weiler et al., 2021; Wood & Hampton, 2022; Yacek, 2018).

However, within the individual demographic questions, the findings of this study suggested a shift in educators' willingness to carry a weapon at school from the original Wood and Hampton (2022) survey. The current study found that only 47% of educators responded that they would not carry a firearm at school, while the Wood and Hampton survey found that 75% of K-12 public school teachers did not think they or other school staff should be allowed to carry guns in school buildings, even with training and authorization. This view was contradictive of the statistical findings of the perceptions of general safety independent samples *t* test where there was a statistically significant lack of support for teacher concealed carry by those without a policy. Despite the survey focusing only on Missouri public K-12 educators, the data presented in the study could reflect perceptions across the United States as more states adopt teacher concealed carry legislation to stop or deter active shootings from occurring.

Overall, the results of the data in this study were found to have statistical significance both in perception of general safety and educator versus administrator only concealed carry policies. Further observations of safety can be inferred from the responses of educators in the demographic responses. To deter or stop active shootings from occurring on school campuses, universal measures should be put in place that some may not be enforcing. Taking every precaution to ensure potential threats are stopped through physical and procedural measures, along with the identification of potential threats through counseling and screeners, is crucial to ending these tragic events (Katsiyannis et al., 2018; Martaindale & Schildkraut, 2022; Wood & Hampton, 2021). The respondents of this study indicated a lack of perceived safety for teacher concealed carry policy. These responses lead the researcher to believe that concealed carry policies

in schools are still not supported widely, yet more schools are adopting such policies. The lack of statistical significance in individual perceived safety between those that had a teacher concealed carry policy and those that did not indicated educators' personal response to others carrying a weapon in school is neither contributing to nor detracting from a feeling of safety. As more states adopt teacher concealed carry policies, more research must be done to understand perceptions of stakeholders in order for schools to make informed decisions for their students, employees, and constituents. School shootings have sadly been a part of our education system for over 100 years. Our country has yet to solve this tragic issue and school shootings continue to rise in the United States year after year.

## REFERENCES

- Anthony, C. L. (2021). *A quantitative descriptive study of teachers' perceptions of school safety* (Publication No. 28716717) [Doctoral dissertation, Northcentral University]. ProQuest Dissertations & Theses Global.  
<https://www.proquest.com/dissertations-theses/quantitative-descriptive-study-teachers/docview/2583424183/se-2>
- Ball, D. (2022). Silent witness: Tracing campus climate at Virginia Tech via unobtrusive measures, 2003-2017. In G. Crews (Ed.), *Impact of school shootings on classroom culture, curriculum, and learning* (pp. 245-270). IGI Global.  
<https://doi.org/10.4018/978-1-7998-5200-1.ch012>
- Bashiti, A. (2021, December 29). Two people share memories of 1974 Olean High shooting. *Greater Olean*. <https://www.tapinto.net/towns/greater-olean/sections/police-and-fire/articles/two-people-share-memories-of-1974-olean-high-shooting>
- Bendici, R. (2017). The evolution of campus security. *University Business*, 20(4), 44–46.  
<https://search.ebscohost.com/login.a.sp?direct=true&AuthType=shib&db=aph&AN=122333995&site=ehost-live>
- Bennett, J. A. (2020). A limited review of the post-Heller fate of campus carry: Preemption and constitutionality in New Hampshire and beyond. *Journal of College & University Law*, 45(1), 182–198. [https://www.nacua.org/docs/default-source/jcul-articles/jcul-articles/volume-45/45\\_jcul\\_182.pdf?sfvrsn=b56773be\\_4](https://www.nacua.org/docs/default-source/jcul-articles/jcul-articles/volume-45/45_jcul_182.pdf?sfvrsn=b56773be_4)

- Bishop, A. (2019). *Shootings, strain, and safety on a college campus: An analysis of perceptions of safety and concealed carry* [Master's thesis, East Tennessee State University]. Electronic Theses and Dissertations. <https://dc.etsu.edu/etd/3525>
- Blair, J. P., & Duron, A. (2022). How police officers are shot and killed during active shooter events: Implications for response and training. *The Police Journal: Theory, Practice and Principles*, 96(3), 411-429.  
<https://doi.org/10.1177/0032258x221087827>
- Blair, J. P., & Martaindale, M. H. (2013). *Evaluating police tactics: An empirical assessment of room entry techniques*. Routledge.  
<https://doi.org/10.4324/9781315721644>
- Blair, J. P., Martaindale, M. H., & Sandel, W. L. (2019). Peek or push: An examination of two types of room clearing tactics for active shooter event response. *SAGE Open*, 9(3). <https://doi.org/10.1177/2158244019871052>
- Blair, J. P., Nichols, T., Burns, D., & Curnutt, J. R. (2013). *Active shooter events and response*. Routledge. <https://doi.org/10.1201/b14996>
- Blair, J. P., Sandel, W. L., & Martaindale, M. H. (2021). Correlates of the number shot and killed in active shooter events. *Homicide Studies*, 25(4), 335-360.  
<https://doi.org/10.1177/1088767920976727>
- Bureau of Justice Assistance. (2018). *STOP School Violence Act summary*.  
[https://bja.ojp.gov/sites/g/files/xyckuh186/files/media/document/stop-school-violence-program\\_summary\\_october\\_2018.pdf](https://bja.ojp.gov/sites/g/files/xyckuh186/files/media/document/stop-school-violence-program_summary_october_2018.pdf)
- Burton, A. L., Pickett, J. T., Jonson, C. L., Cullen, F. T., & Burton, V. S. (2021). Public support for policies to reduce school shootings: A moral-altruistic model. *Journal*

- of Research in Crime and Delinquency*, 58(3), 269-305. <https://doi.org/10.1177/0022427820953202>
- Catlett, E. A. (2019). Banks and guns: Social activism following the Parkland, Florida shooting. *North Carolina Banking Institute*, 23(1), 507-537. <https://scholarship.law.unc.edu/nbi/vol23/iss1/25>
- Center for Homeland Defense and Security. (2023, December 20). *Shooting incidents at k-12 schools (Jan 1970- Jun 2020)*. Naval Postgraduate School Shooting Safety Compendium. <https://chds.us/sssc/charts-graphs/>
- Clery Center. (2022). Summary of the Jeanne Clery Act. <https://www.clerycenter.org/the-clery-act>
- Coleman, P. (2023). Targeting school shootings: Using three warning signs—Animal abuse, domestic violence, and conduct disorder – to help prevent massacres. *Widener Commonwealth Law Review*, 32(1), 65-142. [https://nsuworks.nova.edu/law\\_facarticles/457](https://nsuworks.nova.edu/law_facarticles/457)
- Curran, F. C., Fisher, B. W., & Viano, S. L. (2020). Mass school shootings and the short-run impacts on use of school security measures and practices: National evidence from the Columbine tragedy. *Journal of School Violence*, 19(1), 6-19. <https://doi.org/10.1080/15388220.2019.1703713>
- Dagenhard, P., Thompson, A., Dake, J., Pescara Kovach, L., & Rega, P. (2019). Active shooter events in schools: A review of reports and related materials. *Health Behavior & Policy Review*, 6(3), 219-231. <https://doi.org/10.14485/HBPR.6.3.2>
- DeMitchell, T. A., & Rath, C. C. (2019). Armed and dangerous – Teachers? A policy response to security in our public schools. *Brigham Young University Education*

& *Law Journal*, 2019(1), 63-93.

<https://digitalcommons.law.byu.edu/elj/vol2019/iss1/4>

District of Columbia v. Heller, 554 U.S. 570 (2008).

<https://supreme.justia.com/cases/federal/us/554/570/>

Division for Emotional and Behavioral Health. (2024). School shootings: Current status and recommendations for research and practices. *Behavioral Disorders*, 49(2),

116-127. <https://doi.org/10.1177/01987429231214801>

Docherty, M., Sweeten, G., Craig, T., Yang, V. J. H., Decrop, R., Beardslee, J., Piquero, A., Clark, C., & Pardini, D. (2022). Prevalence and risk factors associated with carrying a gun to school during adolescence: A statewide study of middle and high school students. *Journal of School Violence*, 19(1), 35-47.

<https://doi.org/10.1080/15388220.2019.1703718>

Eckhoff, A., & Goodman-Scott, E. (2023). School counselors' perceptions and understandings of lockdown drills: Navigating the paradox of safety and fear.

*Educational Policy*, 37(2), 523-553. <https://doi.org/10.1177/08959048211032667>

Faul, F., Erdfelder, E., Buchner, A., & Lang, A.-G. (2009). Statistical power analyses using G\*Power 3.1: Tests for correlation and regression analyses. *Behavior*

*Research Methods*, 41, 1149-1160.

[https://www.psychologie.hhu.de/fileadmin/redaktion/Fakultaeten/Mathematisch-Naturwissenschaftliche\\_Fakultaet/Psychologie/AAP/gpower/GPower31-BRM-Paper.pdf](https://www.psychologie.hhu.de/fileadmin/redaktion/Fakultaeten/Mathematisch-Naturwissenschaftliche_Fakultaet/Psychologie/AAP/gpower/GPower31-BRM-Paper.pdf)

- Faul, F., Erdfelder, E., Lang, A.-G., & Buchner, A. (2007). G\*Power 3: A flexible statistical power analysis program for the social, behavioral, and biomedical sciences. *Behavior Research Methods*, 39, 175-191.  
[https://www.psychologie.hhu.de/fileadmin/redaktion/Fakultaeten/Mathematisch-Naturwissenschaftliche\\_Fakultaet/Psychologie/AAP/gpower/GPower3-BRM-Paper.pdf](https://www.psychologie.hhu.de/fileadmin/redaktion/Fakultaeten/Mathematisch-Naturwissenschaftliche_Fakultaet/Psychologie/AAP/gpower/GPower3-BRM-Paper.pdf)
- FBI Department of Partner Engagement. (2020). *Active shooter incidents: 20-year review, 2000-2019*. <https://www.fbi.gov/file-repository/active-shooter-incidents-20-year-review-2000-2019-060121.pdf/view>
- FBI Office of Partner Engagement. (2021). *Active shooter incidents in the United States in 2020*. <https://www.fbi.gov/file-repository/active-shooter-incidents-in-the-us-2020-070121.pdf/view>
- FBI Office of Partner Engagement. (2022). *Active shooter incidents in the United States in 2021*. <https://www.fbi.gov/file-repository/active-shooter-incidents-in-the-us-2021-052422.pdf/view>
- Fearnow, B. (2019). Texas allows guns in churches, schools after firearm access laws expanded, effective September 1. *Newsweek.com*.  
<https://www.newsweek.com/texas-gun-laws-september-1-effect-schools-churches-restrictions-1457123>
- Findley, E. S. (2014). *Perceptions of teachers and administrator approval to carry concealed weapons in two rural school districts in south central Missouri* (Publication No. 3670249) [Doctoral dissertation, Southwest Baptist University]. ProQuest Dissertations & Theses Global. <https://www.proquest.com/dissertations->

theses/perceptions-teacher-administrator-approval-carry/docview/1650627498/se-  
2

Flowers, A. S., & Pixley, C. L. (2021). *Twenty years of school-based mass shootings in the United States: Columbine to Santa Fe*. Lexington Books.

Folkman, S. (2013). Stress: Appraisal and coping. In: M. D. Gellman & J. R. Turner (Eds.), *Encyclopedia of behavioral medicine*. Springer.  
[https://doi.org/10.1007/978-1-4419-1005-9\\_215](https://doi.org/10.1007/978-1-4419-1005-9_215)

Gay, L. R., Mills, G. E., & Airasian, P. (2012). *Educational research: Competencies for analysis and applications* (10<sup>th</sup> ed.). Pearson.

Greenberg, A. M. (2019). Democratizing school safety. *Journal of Applied Security Research*, 14(2), 123-139. <https://doi.org/10.1080/19361610.2019.1581876>

Gun Free Schools Act, 20 U.S.C. § 7961 (1994). <https://www.congress.gov/bill/103rd-congress/house-bill/987?s=1&r=46>

Haddad, K. (2023, May 18). 96 years later: Michigan's Bath School disaster remains deadliest in U.S. history. *WDIV ClickOnDetroit*.  
<https://www.clickondetroit.com/features/2023/05/16/96-years-later-michigans-bath-school-disaster-remains-deadliest-in-us-history/>

Hassett, M. R., Bitna, K., & Seo, C. (2020). Attitudes toward concealed carry of firearms on campus: A systematic review of the literature. *Journal of Crime and Justice*, 19(1), 48-61. <https://doi.org/10.1080/15388220.2019.1703717>

Hess, C. (2019). The U.S. Concealed Carry Association woos NRA members with a focus on family. *National Public Radio*.

<https://www.npr.org/2019/12/13/787507138/the-u-s-concealed-carry-association-woos-nra-members-with-a-focus-on-family>

- Highberger, J., Wang, W., & Brittingham, R. (2022). Differences in perception of safety before and after school shootings: A multi-event analysis. *Journal of School Violence, 21*(3), 312-326. <https://doi.org/10.1080/15388220.2022.2098500>
- Hong, J. S., & Espelage, D. L. (2020). An introduction to the special issue: Firearms homicide and perceptions of safety in American schools post-Columbine. *Journal of School Violence, 19*(1), 1–5. <https://doi.org/10.1080/15388220.20191703721>
- Howard, C. C., Kelchner, V. P., Hilaire, B., Campbell, L. O., & Laguardia, E. D. (2022). Districts implementation of active shooter drill policies. *Criminal Justice Policy Review, 33*(7). <https://doi.org/10.1177/08874034211068448>
- Hume, H., & Perreault, G. (2022). Media and mass shootings: Field theory in CNN news coverage of the Columbine High School and Parkland High School mass shootings. *Electronic News, 16*(3), 147-163. <https://doi.org/10.1177/19312431221111380>
- Irwin, V., Wang, K., Cui, J., & Thompson, A. (2023). *Report on indicators of school crime and safety: 2022* (NCES 2023-092/NCJ 307328). U.S. Department of Education, U.S. Department of Justice, Office of Justice Statistics, National Center for Education Statistics, Bureau of Justice Statistics.
- Jaadi, Z. (2024). A step-by-step explanation of principal component analysis (PCA). <https://builtin.com/data-science/step-step-explanation-principal-component-analysis>

- Katsiyannis, A., Whitford, D. K., & Ennis, R. P. (2018). Historical examination of United States intentional mass school shootings in the 20th and 21st centuries: Implications for students, schools, and society. *Journal of Child & Family Studies*, 27(8), 2562–2573. <https://doi.org/10.1007/s10826-018-1096-2>
- Kennedy, M. (2019). After Columbine. *American School & University*, 91(7), 22–24. <https://search.ebscohost.com/login.aspx?direct=true&AuthType=shib&db=afh&AN=137617991&site=eds-live>.
- King, S., & Bracy, N. L. (2019). School security in the post-Columbine era: Trends, consequences, and future directions. *Journal of Contemporary Criminal Justice*, 35(3), 274–295. <https://doi.org/10.1177/1043986219840188>
- Kissel, B. T., Whittingham, C. E., Laman, T. T., & Miller, E. T. (2019). Student activists and authors: Contemporary youth voices as classroom texts. *English Journal*, 108(4), 76-82. <https://jstor.org/stable/26670032>
- Kowalski, R. M., Leary, M., Hendley, T., Rubley, K., Chapman, C., Chitty, H., Carroll, H., Cook, A., Richardson, E., Robbins, C., Wells, S., Bourque, L., Oakley, R., Bednar, H., Jones, R., Tolleson, K., Fisher, K., Graham, R., Scarborough, M., ... Longacre, M. (2021). K-12, college/university, and mass shootings: similarities and differences. *The Journal of Social Psychology*, 161(6), 753–778. <https://doi.org/10.1080/00224545.2021.1900047>
- Krohne, H. W. (2001). N. Smelser & P. Baltes (Ed.), *International encyclopedia of the social & behavioral sciences: Stress and coping theories* Pergamon. <https://doi.org/10.1016/B0-08-043076-7/03817-1>

- Laerd Dissertation. (2024, January 9). Sampling strategy.  
<https://dissertation.laerd.com/sampling-strategy.php>
- Laerd Statistics. (2024, February 2). Independent t test for two samples.  
<https://statistics.laerd.com/>
- Lamoreaux, D., & Sulkowski, M. L. (2020). An alternative to fortified schools: Using crime prevention through environmental design (CPTED) to balance student safety and psychological well-being. *Psychology in the Schools*, 57(1), 152–165.  
<https://doi.org/10.1002/pits.22301>
- LaRose, J., Torres, J. A., & Barton, M. S. (2021). Changing media framings of school shootings: A case study of the Parkland school shooting. *Journal of Mass Violence Research*, 1(1), 44-61. <https://doi.org/10.53076/jmvr11874>
- Lazarus, R. S. (1966). *Psychological stress and the coping process*. McGraw-Hill.
- Lopez, B. (2022, June 8). Texas teachers union survey finds that school employees don't want to be armed. *The Texas Tribune*.  
<https://www.texastribune.org/2022/06/08/texas-teachers-armed-survey/>
- Maiers, S. (2022, May 25). NEA rejects call to arm teachers in wake of school massacre in Uvalde, Texas. *National Education Association*. <https://www.nea.org/about-nea/media-center/press-releases/nea-rejects-call-arm-teachers-wake-school-massacre-uvalde-texas>
- Mancini, C., Cook, A. K., Smith, J. C., & McDougale, R. (2020). Packing heat in the classroom: Public support for “armed teacher” policy. *Journal of School Violence*, 19(4), 610-622. <https://doi.org/10.1080/15388220.2020.1786835>

- Marjory Stoneman Douglas Public Safety Commission. (2019). *Marjory Stoneman Douglas high school public safety commission: Initial report*.  
<http://www.fdle.state.fl.us/MSDHS/CommissionReport.pdf>
- Martaindale, M. H. (2021). Improving the accuracy of firearm identification in dynamic use of force scenario. *Police Quarterly*, 24(1), 104-130.  
<https://doi.org/10.1177/1098611120944387>
- Martaindale, M. H., & Blair, J. P. (2019). The evolution of active shooter response training protocols since Columbine: Lessons from the Advanced Law Enforcement Rapid Response Training center. *Journal of Contemporary Criminal Justice*, 35(3), 342-356. <https://doi.org/10.1177/1043986219840237>
- Martaindale, M. H., & Schildkraut, J. (2022). Armed and considered capable? Law enforcement officers' attitudes about armed teacher policies in the USA. *Crime Prevention and Community Safety*, 24, 116-131. <https://doi.org/10.1057/s41300-022-00142-4>
- McCuddy, T., Shamsrad, F., & Esbensen, F. A. (2022). Arming teachers as a response to school violence: Using a risk assessment model to understand student perceptions. *Journal of School Violence*, 22(1), 61-74.  
<https://doi.org/10.1080/15388220.2022.2132505>
- McGraw, S. (2022, June 1). Essay: America's first modern mass shooting never really ended. *The Texas Tribune*. <https://www.texastribune.org/2022/06/01/texas-tower-shooting-myth-good-guy-with-gun/>

- McMurdo, S. (2019). "It's a filthy goddamn helpless world": Reimagining Columbine, Tate Langdon and the specter of school shooters. *European Journal of American Culture*, 38(1), 57-69. [http://doi.org/10.1386/ejac.38.1.57\\_1](http://doi.org/10.1386/ejac.38.1.57_1)
- McQuiller, M. V. (2019). Enough is enough: Congressional solutions to curb gun violence in America's k-12 schools. *DePaul Journal for Social Justice*, 12(1), 1-21. <https://via.library.depaul.edu/jsj/vol12/iss1/2>
- Milligan, S. (2022, May 27). Uvalde, Buffalo shootings expose the myth of the 'good guy with a gun.' *U.S. News & World Report*. <https://www.usnews.com/news/the-report/articles/2022-05-27/uvalde-buffalo-shootings-expose-the-myth-of-the-good-guy-with-a-gun>
- Missouri Department of Elementary and Secondary Education. (2023). *Missouri school directory: 2022-2023 statistics of Missouri public schools*. <https://apps.dese.mo.gov/MCDS/Home.aspx>
- Missouri Title XI Act, Mo. Stat. § 160.665 (2014). <https://revisor.mo.gov/main/OneSection.aspx?section=160.665>
- Murphy, K. (2014, September 11). Missouri teachers can become armed safety officers under new law. *Reuters*. <https://www.reuters.com/article/us-usa-missouri-concealed-carry/missouri-teachers-can-become-armed-safety-officers-under-new-law-idUSKBN0H62JO20140911>
- Muschert, G. (2019). Afterword: The Columbine effect on culture, policy, and me. *Journal of Contemporary Criminal Justice*, 35(3), 357-372. <https://doi.org/10.1177/1043986219840238>

- National Conference of State Legislatures. (2022). *School safety: Guns in schools*.  
<https://www.ncsl.org/research/education/school-safety-guns-in-schools>
- National Teacher Hall of Fame. (2020). Enoch Brown incident. Retrieved from  
<https://nthfmemorial.org/enoch-brown-incident/>
- Olive, M. (2019). *Teachers' perceptions of safety regarding school shootings*  
(Publication No. 6550) [Master's thesis, University of Central Florida]. STARS  
Library. <http://purl.fcla.edu/fcla/etd/CFE0007698>
- Pacheco, R. (2022). *Exploring attitudes of middle school stakeholders towards teachers carrying handguns in schools* (Publication No. 29319279) [Doctoral dissertation, Nova Southeastern University]. ProQuest Dissertations & Theses Global.  
<https://www.proquest.com/dissertations-theses/exploring-attitudes-middle-school-stakeholders/docview/2713200288/se-2>
- Pearce, M. (2020, August 19). Trump and Biden on guns: Far apart on policy and perspective. *Los Angeles Times*.  
<https://www.latimes.com/politics/story/2020-08-19/trump-biden-gun-policy>
- Peterson, J., & Densley, J. (2021a). *Mass public shootings in the United States, 1966-Present*. The Violence Project. <https://www.theviolenceproject.org/mass-shooter-database/>
- Peterson, J., & Densley, J. (2021b). *The Violence Project: How to stop a mass shooting epidemic*. Abrams Press.
- Pyo, J. (2020). School principals' perceptions of crime risk and academic climate: Links to school safety practices. *Journal of School Violence, 19*(4), 594-609.  
<https://doi.org/10.1080/15388220.2020.1783671>

- Rajan, S., Reeping, P. M., Ladhani, Z., Vasudevan, L., & Branas, C. (2022). Gun violence in K-12 schools in the United States: Moving towards a preventative (versus reactive) framework. *Preventative Medicine, 165*(Pt A), 107280. <https://doi.org/10.1016/j.ypmed.2022.107280>
- Reeping, P. M., Klarevas, L. J., Rajan, S., Rowhani-Rahbar, A., Heinze, J., Zeoli, A. M., Goyal, M. K., Zimmerman, M., & Branas, C. C. (2022). State firearm laws, gun ownership, and K-12 school shootings: Implications for school safety. *Journal of School Violence, 21*(2), 132-146. <https://doi.org/10.1080/15388220.2021.2018332>
- Rees, C. A., Lee, L. K., Fleegler, E. W., & Mannix, R. (2019). Mass school shootings in the United States: A novel root cause analysis using lay press reports. *Clinical Pediatrics, 58*(13), 1423–1428. <https://doi.org/10.1177/0009922819873650>
- Reilly, K. (2022). Schools are putting more cops on campus despite the “abject failure” in Uvalde. *Time.com*. 1. <https://time.com/6190182/school-resource-officers-uvalde/>
- Riedman, D. (2022). *Active shooter situations*. K-12 School Shootings Database. <https://k12ssdb.org/>
- Riedman, D. (2024, January 24). Three key findings every school should know from DOJ report on Uvalde. *School Shooting Data Analysis and Reports*. <https://k12ssdb.substack.com/p/three-key-findings-every-school-should>
- Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *Journal of Psychology, 91*(1), 93-114. <https://doi.org/10.1080/00223980.1975.9915803>

- Rogers, R. W., & Prentice-Dunn, S. (1997). Protection motivation theory. In D. S. Gochman (Ed.), *Handbook of health behavior research 1: Personal and social determinants* (pp. 113–132). Plenum Press.
- Schildkraut, J., Carr, C. M., & Terranova, V. (2018). Armed and academic: Perceptions of college students on concealed carry on campus policies. *Journal of School Violence, 17*(4), 487–499. <https://doi.org/10.1080/15388220.2018.1449655>
- Schildkraut, J., & Martaindale, M. (2022). Should firearms be allowed in k-12 public schools? An analysis of law enforcement’s perceptions of armed teacher policies. *Security Journal, 35*, 1288-1307. <https://doi.org/10.1057/s41284-022-00327-4>
- Schweikert, K., Huth, M., & Gius, M. (2021). Detecting a copycat effect in school shootings using spatio-temporal panel count models. *Contemporary Economic Policy, 39*, 719-736. <https://doi.org/10.1111/coep.12532>
- Scudder, P. (2021). *Teachers and school administrators who carry concealed handguns at school* [Doctoral dissertation, St. Cloud State University]. Educational Leadership Commons. [https://repository.stcloudstate.edu/edad\\_etds/80](https://repository.stcloudstate.edu/edad_etds/80)
- Shamserad, F., McCuddy, T., & Esbensen, F.-A. (2021). Pistol packing teachers: What do students think? *Journal of School Violence, 20*(2), 127-138. <https://doi.org/10.1080/15388220.2020.1858424>
- Somers, P., Fry, J. J., Jones, A., & Newton, A. (2020). Is that a gun in your pocket? Dilemmas of student and academic services professionals in a campus carry state. *College Student Affairs Journal, 38*(1), 78-90. <https://doi.org/10.1353/csaj.2020.0005>

- Spitzer, R. (2022). How the Supreme Court rewrote history to justify its flawed gun decision: Gun laws are not a creation of the 20th century but are as old as the country's beginnings. *NBC News*.  
<https://www.nbcnews.com/think/opinion/supreme-court-expands-gun-rights-concealed-carry-history-rcna35000>
- Stock, A. M. (2022). *Differences between employees' perceptions of safety regarding concealed carry on public campuses in Utah and Tennessee* (Publication No. 29061125) [Doctoral dissertation, Southwest Baptist University]. ProQuest Dissertations & Theses Global. <https://www.proquest.com/dissertations-theses/differences-between-employees-perceptions-safety/docview/2644413998/se-2>
- STOP School Violence Act, H. R., 4909, 15th Cong. (2018).  
<https://www.congress.gov/bill/115th-congress/house-bill/4909/text>
- 34 states have a path for teachers to carry firearms. Should N.C. be next? (2022, August 8). *The Carolina Journal*. <https://www.carolinajournal.com/34-states-have-a-path-for-teachers-to-carry-firearms-should-n-c-be-next/>
- Thompson, J. (2024, January 29). To stop a shooter: Why would an armed officer stand by as a school shooting unfolds? *The Atlantic*.  
[https://www.theatlantic.com/magazine/archive/2024/03/parkland-shooter-scot-peterson-coward-broward/677170/?utm\\_source=apple\\_news&utm\\_medium=email](https://www.theatlantic.com/magazine/archive/2024/03/parkland-shooter-scot-peterson-coward-broward/677170/?utm_source=apple_news&utm_medium=email)
- U.S. Concealed Carry Association. (2023). Born to protect.  
<https://www.usconcealedcarry.com/>

- U.S. Department of Justice. (2024). *Critical incident review: Active shooter at Robb Elementary School*. Office of Community Oriented Policing Services.  
<https://portal.cops.usdoj.gov/resourcecenter/content.ashx/cops-r1141-pub.pdf>
- Wallace, L. N. (2022). Guns in school: Juveniles and teachers. In I. Management Association (Ed.), *Research anthology on interventions in student behavior and misconduct* (pp. 343-366). IGI Global. <https://doi.org/10.4018/978-1-6684-6315-4.ch019>
- Wang, X., & Cheng, Z. (2020). Cross-sectional studies: Strengths, weaknesses, and recommendations, *Chest*, *158*(1S), S65-S71.  
<https://doi.org/10.1016/j.chest.2020.03.012>
- Ward, M. (2023). These are the 33 states that allow teachers to carry firearms. *District Administration*. <https://districtadministration.com/these-are-the-33-states-that-allow-teachers-to-carry-a-firearm/>
- Warnick, B. R., & Kapa, R. (2019). Protecting students from gun violence. *Education Next*, *19*(2), 22-28. <https://www.educationnext.org/protecting-students-from-gun-violence-does-target-hardening-do-more-harm-than-good/>
- Weber, P. J., Coronado, A., & Lafleur, K. (2023, September 1). Texas wanted armed officers at every school after Uvalde: Many can't meet that standard. *Associated Press*. <https://apnews.com/article/texas-schools-police-mandate-budget-guns-9a68ff8935fa376965ad754056de1673>
- Weiler, S., Skousen, J., Kopanke, J., & Cornelius, L. (2021). Taking aim at preventing school shootings: A comparative analysis of school board policy related to the

practice of arming educators. *Journal of School Violence*, 20(1), 89-100.

<https://doi.org/10.1080/15388220.2020.1850464>

Williams, E. (2022). *Sandy Hook: An American tragedy and the battle for truth*. Penguin Audio

Winston, S. L. (2016). *Equipping teachers with firearms to promote safety in U.S. public high schools* (Publication No. 10253076) [Doctoral dissertation, Walden University]. ProQuest Dissertations & Theses Global.

<https://www.proquest.com/dissertations-theses/equipping-teachers-with-firearms-promote-safety-u/docview/1868849941/se-2>

Wood, B. J., & Hampton, E. (2021). The influence of school resource officer presence on teacher perceptions of school safety and security. *School Psychology Review*, 50(2), 360-370. <https://doi.org/10.1080/2372966X.2020.1844547>

Wood, B. J., & Hampton, E. (2022). How teachers feel about arming educators in K-12 schools: A statewide investigation. *Journal of School Violence*, 21(2), 119-131. <https://doi.org/10.1080/15388220.2021.2007115>

Yacek, D. (2018). America's armed teachers: An ethical analysis. *Teachers College Record: The Voice of Scholarship in Education*, 120(8), 1-36. <https://doi.org/10.1177/016146811812000801>

## APPENDIXES

### Appendix A

#### Request to Use Survey & Permission

Dr. Wood,

I wanted to thank you and Dr. Hampton for providing me with your survey *Teacher Perspectives of School Safety and Guns in Schools*, and for publishing the research that you have done regarding teacher concealed carry perspectives. My dissertation is focused on looking at Missouri public K-12 educators' perceptions of safety based on whether they have a policy for teacher carry versus if they do not. Since you have already started research in this realm and designed these surveys, I am humbly requesting the following:

1. I would like to ask permission to use the "Teacher Perspectives of School Safety and Guns in School" survey as the instrument for my dissertation.
2. I would like to ask permission to add questions or modify existing questions to answer my research questions specific to the difference between the perception of safety of schools with teacher carry policies and those that do not.

I am grateful for what you have provided me already as well as your and Dr. Hampton's time in considering my requests.

Sincerely,

Jason C. Koele

Southwest Baptist University, Education Doctoral Student

Hi Jason —

You have my permission to use, with appropriate citation, any of our published materials and/or instruments. Thanks!

Brandon J. Wood, Ph.D., NCSP  
Assistant Professor and Program Director  
School Psychology Program

## Appendix B

### Modified Survey

#### K-12 Missouri Public Educator Perspectives of School Safety and Guns in Schools

Survey Information: Provided in Appendix E

Q1 Informed consent

The first set of questions asks about your perceptions of personal safety and the safety of your students at school.

Q2 Please indicate the degree to which you agree with the following statements:

	<b>STRONGLY AGREE (1)</b>	<b>AGREE (2)</b>	<b>SOMEWHAT AGREE (3)</b>	<b>SOMEWHAT DISAGREE (4)</b>	<b>DISAGREE (5)</b>	<b>STRONGLY DISAGREE (6)</b>
<b>I FEEL PHYSICALLY SAFE AT MY SCHOOL (1)</b>						
<b>I FEEL THAT THERE IS ADEQUATE SAFETY AND SECURITY AT MY SCHOOL (2)</b>						
<b>SCHOOLS, IN GENERAL, ARE SAFE PLACES (3)</b>						
<b>SCHOOL SHOOTINGS ARE <u>NOT</u> THE NUMBER ONE THREAT TO SCHOOL SAFETY (4)</b>						

**MY STUDENTS FEEL SAFE AT SCHOOL (5)**

The next set of questions ask about your school's prevention and security measures.

Q3 Please respond by selecting "yes," "no," or "not sure/don't know" for each of the following statements:

	YES (1)	NO (2)	NOT SURE/ DON'T KNOW (0)
<b>MY SCHOOL HAS FENCES AROUND ITS PREMISES (1)</b>			
<b>MY SCHOOL REQUIRES ME TO WEAR A FACULTY PHOTO IDENTIFICATION BADGE DURING SCHOOL HOURS (2)</b>			
<b>MY SCHOOL HAS METAL DETECTORS (3)</b>			
<b>MY SCHOOL HAS SCANNING WANDS (4)</b>			
<b>MY SCHOOL ROUTINELY DOES STUDENT BACKPACK INSPECTIONS (5)</b>			

**MY SCHOOL DOES RANDOM STUDENT LOCKER CHECKS (6)**

**MY SCHOOL REQUIRES VISITORS TO SIGN IN (7)**

**MY SCHOOL HAS A VIDEO SURVEILLANCE SYSTEM (8)**

**MY SCHOOL HAS A SCHOOL RESOURCE OFFICER (SRO) OR REGULAR POLICE PRESENCE IN THE BUILDING (9)**

**MY SCHOOL'S DOORS ARE LOCKED DURING SCHOOL HOURS TO CONTROL ACCESS TO THE SCHOOL BUILDING (10)**

**MY SCHOOL HAS A SCHOOL PROTECTION OFFICER POLICY, WHICH ALLOWS TEACHERS OR ADMINISTRATORS TO CONCEALED CARRY AT SCHOOL (11)**

The next set of questions ask about firearm usage in schools.

Q4 Please indicate the degree to which you agree with the following statements:

	<b>STRONGLY AGREE (1)</b>	<b>AGREE (2)</b>	<b>SOMEWHAT AGREE (3)</b>	<b>SOMEWHAT DISAGREE (4)</b>	<b>DISAGREE (5)</b>	<b>STRONGLY DISAGREE (6)</b>
<b>TEACHERS SHOULD BE ALLOWED TO CARRY GUNS AT SCHOOL (1)</b>						
<b>ONLY ADMINISTRATORS SHOULD BE ALLOWED TO CARRY GUNS AT SCHOOL (2)</b>						
<b>THE 120 HOURS OF REQUIRED SCHOOL PROTECTION OFFICER TRAINING IS SUFFICIENT FOR AN EDUCATOR TO CARRY A FIREARM AT SCHOOL (3)</b>						
<b>OTHER THAN A LICENSED LAW ENFORCEMENT OFFICER, I FEEL COMFORTABLE HAVING OTHER SCHOOL PERSONNEL ARMED WITH GUNS AT SCHOOL (4)</b>						
<b>I SUPPORT LOOSENING OR ENDING THE PROHIBITION OF GUNS ON SCHOOL GROUNDS (5)</b>						

**GUN  
RESTRICTIONS  
MAKE  
SCHOOLS  
MORE  
VULNERABLE  
TO WOULD-BE  
SHOOTERS (6)**

**GUN LAWS IN  
THE UNITED  
STATES  
SHOULD BE  
LESS STRICT (7)**

**GUN-FREE  
SCHOOL ZONES  
MAKE SCHOOLS  
MORE  
VULNERABLE TO  
A GUN-RELATED  
ATTACK (8)**

Q5 If given the opportunity and with completion of the Missouri School Protection Officer training requirements, would you like to carry a registered handgun at school?

- Yes (1)
- No (2)
- Don't Know / Unsure (3)

Q6 If you were offered a bonus or additional compensation, would you reconsider whether you'd be willing to carry a registered handgun at school?

- Yes (1)
- No (2)
- Don't Know / Unsure (3)

The final set of questions asks about demographic information and your school.

Q7 Please select your gender:

- Male (1)
- Female (2)
- Other (3)
- Prefer not to disclose (4)

Q8 Please select your race/ethnicity:

- Black / African American (1)
- Caucasian / White (2)
- Hispanic / Latino (3)
- Asian American (4)
- Multi-Racial (5)
- Other (6)
- Prefer not to disclose (7)

Q9 Please select your political affiliation:

- Democratic Party (1)
- Republican Party (2)
- Independent (3)
- Other (Tea, Libertarian Party) (4)
- I do not identify with any political group (5)
- I prefer not to disclose (6)

Q10 How many students are in your school?

- 1-400 (1)
- 401-800 (2)
- 801-1200 (3)
- > 1200 (4)

Q11 Which of the following best describes the building for which you are currently serving as an educator?

- Early Childhood (1)
- Elementary (2)
- Intermediate (3)
- Secondary (4)
- District-Wide (5)

Q12 What is your role at your school?

- Teacher (1)
- Administrator (2)
- Paraprofessional (3)
- School Resource Officer (4)
- Other (5)

Q13 Which of the following best describes your school's setting?

- Urban (1)
- Suburban (2)
- Rural (3)
- Other / Not Sure (4)

Q14 How many years have you been in education?

- 1-5 years (1)
- 6-10 years (2)
- 11-15 years (3)
- 16-20 years (4)
- > 20 years (5)

Q15 Does your school conduct active shooter drills?

- Yes (1)
- No (2)
- Don't Know / Not Sure (3)

Q16 Has your school experienced at least one firearm incident within the past year? For the purposes of this study, a firearm incident is defined by: 1) a student had a gun on them at school or 2) a gun was found in a student's locker, or 3) any school gun event with or without an actual shooting.

- Yes (1)
- No (2)
- Don't Know / Not Sure (3)

## Appendix C

Original Survey (Wood & Hampton, 2022)

### Teacher Perspectives of School Safety and Guns in Schools

Start of Block: Default Question Block

Q1 introduction / informed consent

Q2 The first set of questions ask about your perceptions of personal safety and the safety of your students at school.

Q3 Please indicate the degree to which you agree with the following statements:

	<b>STRONGLY AGREE (1)</b>	<b>AGREE (2)</b>	<b>SOMEWHAT AGREE (3)</b>	<b>SOMEWHAT DISAGREE (4)</b>	<b>DISAGREE (5)</b>	<b>STRONGLY DISAGREE (6)</b>
<b>I FEEL PHYSICALLY SAFE AT MY SCHOOL (1)</b>						
<b>I FEEL THAT THERE IS ADEQUATE SAFETY AND SECURITY AT MY SCHOOL (2)</b>						
<b>I WORRY ABOUT SOMEONE COMMITTING A SCHOOL SHOOTING AT MY SCHOOL (3)</b>						
<b>SCHOOLS, IN GENERAL, ARE DANGEROUS PLACES (4)</b>						

<b>SCHOOL SHOOTINGS ARE THE NUMBER ONE THREAT TO SCHOOL SAFETY (5)</b>	
<b>MY STUDENTS FEEL SAFE AT SCHOOL (6)</b>	
<b>MY STUDENTS ARE CONCERNED ABOUT THEIR SAFETY AT SCHOOL (7)</b>	

Q4 The next set of questions asks about your school's prevention and security measures.

Q5 Please respond by selecting "yes," "no," or "not sure/don't know" for each of the following statements:

	YES (1)	NO (2)	NOT SURE/ DON'T KNOW (3)
<b>MY SCHOOL HAS FENCES AROUND ITS PREMISES (1)</b>			
<b>MY SCHOOL REQUIRES ME TO WEAR A FACULTY PHOTO IDENTIFICATION BADGE DURING SCHOOL HOURS (2)</b>			
<b>MY SCHOOL HAS METAL DETECTORS (3)</b>			

**MY SCHOOL HAS  
SCANNING  
WANDS (4)**

**MY SCHOOL  
ROUTINELY  
DOES STUDENT  
BACKPACK  
INSPECTIONS  
(5)**

**MY SCHOOL  
DOES  
RANDOM  
STUDENT  
LOCKER  
CHECKS (6)**

**MY SCHOOL  
REQUIRES  
VISITORS TO  
SIGN IN (7)**

**MY SCHOOL HAS  
A VIDEO  
SURVEILLANCE  
SYSTEM (8)**

**MY SCHOOL HAS  
A SCHOOL  
RESOURCE  
OFFICER (SRO)  
OR REGULAR  
POLICE  
PRESENCE IN  
THE  
BUILDING (9)**

**MY SCHOOL'S  
DOORS ARE  
LOCKED DURING  
SCHOOL HOURS  
TO CONTROL  
ACCESS TO THE  
SCHOOL  
BUILDING (10)**

Q8 The next set of questions asks about firearm usage in schools.

Q9 Please indicate the degree to which you agree with the following statements:

	<b>STRONGLY AGREE (1)</b>	<b>AGREE (2)</b>	<b>SOMEWHA T AGREE (3)</b>	<b>SOMEWHAT DISAGREE (4)</b>	<b>DISAGRE E (5)</b>	<b>STRONGLY DISAGREE (6)</b>
<b>TEACHERS SHOULD BE ALLOWED TO CARRY GUNS AT SCHOOL (1)</b>						
<b>SCHOOLS SHOULD BE GUARDED BY ARMED OFFICERS (2)</b>						
<b>OTHER THAN A LICENSED LAW ENFORCEMENT OFFICER, I FEEL COMFORTABLE HAVING OTHER SCHOOL PERSONNEL ARMED WITH GUNS AT SCHOOL (3)</b>						
<b>I SUPPORT LOOSENING OR ENDING THE PROHIBITION OF GUNS ON SCHOOL GROUNDS (4)</b>						

**GUN  
RESTRICTIONS  
MAKE  
SCHOOLS  
MORE  
VULNERABLE  
TO WOULD-BE  
SHOOTERS (5)**

**GUN LAWS IN  
THE UNITED  
STATES  
SHOULD BE  
MORE STRICT  
(6)**

**TEACHERS  
SHOULD BE  
REQUIRED BY  
LAW, TO CARRY  
REGISTERED  
GUNS AT SCHOOL  
(7)**

**GUN FREE  
SCHOOL ZONES  
MAKE SCHOOLS  
MORE  
VULNERABLE TO  
A GUN-RELATED  
ATTACK (8)**

Q10 If given the opportunity, would you like to carry a registered handgun at school?

- Yes (1)
- No (2)
- Don't Know / Unsure (3)

Skip To: Q11 If given the opportunity, would you like to carry a registered handgun at school? = No, Don't Know / Unsure

Q11 If you were offered a bonus or additional compensation, would you reconsider whether you'd be willing to carry a registered handgun at school?

- Yes (1)
- No (2)
- Don't Know / Unsure (3)

Q12 The final set of questions ask about you and your school.

Q13 Please select your gender:

- Male (1)
- Female (2)
- Transgender (3)
- Other (4)
- Prefer not to disclose (5)

Q14 Please select your race/ethnicity:

- Black / African American (1)
- Caucasian / White (2)
- Hispanic / Latino (3)
- Asian American (4)
- Multi-Racial (5)
- Other (6)
- Prefer not to disclose (7)

Q15 Please select your political affiliation:

- Democratic Party (1)
- Republican Party (2)
- Independent (3)
- Other (Tea, Libertarian Party) (4)
- I do not identify with any political group (5)
- I prefer not to disclose (6)

Q16 How many students are in your school?

- 01-400 (1)
- 0401-800 (2)
- 0801-1200 (3)
- 0 > 1200 (4)

Q17 Which of the following best describes the building for which you are currently serving as a teacher?

- Early Childhood (1)
- Elementary (2)
- Intermediate (3)
- Secondary (4)

Q18 How many years have you been a school teacher?

- 1-5 years (1)
- 6-10 years (2)
- 11-15 years (3)
- 16-20 years (4)
- > 20 years (5)

Q19 What type of school are you currently a teacher at?

- Public (1)
- Private (2)
- Charter (3)
- Alternative (4)
- Other (5)

Q20 Which of the following best describes your school's setting?

- Urban (1)
- Suburban (2)
- Rural (3)
- Other / Not Sure (4)

Q21 Does your school conduct active shooter drills?

- Yes (1)
- No (2)
- Don't Know / Not Sure (3)

Q22 Has your school experienced at least one firearm incident within the past year? For the purposes of this study, a firearm incident is defined by: 1) a student had a gun on them at school or 2) a gun was found in a student's locker, or 3) any school gun event with or without an actual shooting.

- Yes (1)
- No (2)
- Don't Know / Not Sure (3)

# Appendix D

## Southwest Baptist University Research Review Board

Cover Page  
APPLICATION FOR RESEARCH INVOLVING HUMAN SUBJECTS  
IN BIOMEDICAL, BEHAVIORAL, OR EDUCATIONAL RESEARCH

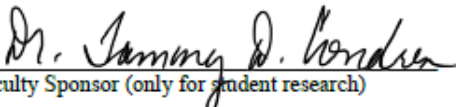
Title of Project:

DIFFERENCES BETWEEN MISSOURI K-12 EDUCATOR PERCEPTIONS OF SAFETY ON CAMPUSES THAT  
ALLOW TEACHER CONCEALED-CARRY & THOSE THAT DO NOT

Principal Investigator: Jason C. Koele

Faculty Sponsor (for student research only): Dr. Tammy Condren

We, the undersigned, approve this research as appropriate to the mission of our departments, colleges,  
and Southwest Baptist University.

  
Faculty Sponsor (only for student research)

3-18-24  
Date

\_\_\_\_\_  
Chair Signature

\_\_\_\_\_  
Department

\_\_\_\_\_  
Date

  
Dean Signature

\_\_\_\_\_  
Professional Programs  
College

4/3/24  
Date

***THIS FORM IS FOR RRB USE ONLY***

**RRB RESEARCH REVIEW DETERMINATION**

- Exempt from Review (Chair RRB)
- Expedited Review (RRB Subcommittee)  
Chair, please list names of the subcommittee:
- Full RRB Review (Full RRB Committee)

**RRB RESEARCH APPROVAL DETERMINATION**

- Disapproval Date: \_\_\_\_\_
- Conditional Approval\* (circle A or B) Date: \_\_\_\_\_
- A. Approval, subject to minor change
- B. Approval in general but requiring major alterations, clarifications or assurances
- (\* Data collection cannot begin until Full Approval is given by the RRB Chair)
- Full Approval Date: 04/09/2024

COMMENTS:

*Colleen Stuler*  
Chair, Research Review Board

04/09/2024  
Date

## **Appendix E**

### **Informed Consent to Participate in Doctoral Research Study**

You are invited to participate in a research study approved by the Southwest Baptist University Research Review Board conducted by doctoral student Jason Koele. The study is comparing K-12 educators' perceptions of safety pertaining to schools that have a teacher concealed carry policy and those that do not. The researcher is seeking to determine whether employees' perceptions of safety are different on K-12 campuses where teachers are allowed to carry concealed firearms versus those campuses that do not. You have been purposefully chosen to participate in this study because you meet the specific criteria established by the researcher.

**By clicking on the survey link, you are consenting to participating in this research study and understand the following:**

#### **Purpose of the Study**

As K-12 public schools continue to deal with mass shootings, schools must adapt new policies and procedures to combat these situations. One of the policies schools must consider is teacher concealed carry, which is allowable in Missouri. The purpose of this causal-comparative study is to examine the perception of safety of teachers whose schools allow teachers who have completed the 120 hours of required training to conceal carry versus schools that do not have a policy in place. This causal-comparative study is designed to study the impact of concealed carry laws and K-12 teacher perceptions of safety at public K-12 schools. The research involves gathering data via an online survey completed through Google Forms.

#### **Selection and Sampling**

The researcher limited the respondents to employees who are over the age of 18 years old that are teachers in Missouri public K-12 schools. Missouri was chosen due to its laws allowing for teacher concealed carry in public K-12 schools and program requirements for the Doctorate of Education from Southwest Baptist University in Bolivar, MO.

#### **Procedures**

Superintendents of all public academic institutions in the state of Missouri will receive an email inviting them to participate in this study. If the Superintendent accepts, then the researcher will invite all teachers of that public K-12 school to participate in the study through email that includes the survey link. The survey is broken into four sections, to have all necessary data to examine the correlation between the respondent's background with weapons on the K-12 campus and their perception of safety on a campus that allows teacher concealed carry. The format of the survey included yes/no questions and 6-point Likert scale questions. The Likert scale quantified the perceptions of safety of the respondent from Strongly Agree to Strongly Disagree. Once the participant finishes the survey there is no further involvement with the study. If the

participant wants a copy of the findings of the study, they can email the researcher. Private academic institutions and virtual K-12 schools are not being invited to participate in this survey because they have different policies about school safety. Students are not being invited because this study focuses only on teacher perceptions of safety pertaining to concealed carry policies.

### **Survey Commitment**

In this survey you will be asked questions about your perceptions of safety at school pertaining to teacher concealed carry. Participation in this study should take you approximately 10 minutes to complete and no further involvement once the survey is completed. If you feel uncomfortable answering any of the questions, you can withdraw from the survey.

### **Confidentiality and Anonymity**

Confidentiality and Anonymity are guaranteed if you participate in this study. Demographic information will be asked, but will not identify the location of the school in which you are employed. The survey will be administered via Google Forms. Google Forms is a survey system that creates a unique password-protected link provided to you in this email that keeps all data confidential and anonymous.

### **Risks**

Your participation in this study is completely voluntary and the study does not pose any risk to participants. However, if you feel uncomfortable answering any questions, you can withdraw from the survey. Your participation in this study is greatly appreciated! With the need to keep K-12 public schools a safer place, exploring the perceptions of safety at K-12 public schools which allows for teachers to concealed carry, can help districts make decisions about their safety protocols and the effects their decision has on their school as a whole. Several studies have examined students' perspectives, but little research has explored teacher perspectives. Understanding the perspectives of teachers is vital, since they are the individuals who could be carrying a concealed carry if a public K-12 school adopts such a policy. If you have any questions regarding the survey, please contact me at (715)222-9914 or [jkoele@skylineschools.net](mailto:jkoele@skylineschools.net).

Thank you,  
Jason C. Koele  
Doctoral Candidate, Southwest Baptist University

## Appendix F

### Request for Academic Institution Approval to Conduct Research

Dear District Superintendent,

My name is Jason Koele and I am a Doctoral student at Southwest Baptist University. I am currently working on my dissertation about Missouri K-12 public school teacher perceptions of safety on campuses that allow concealed carry versus those that do not. I would like to use your public K-12 school as part of my research setting to perform the study through a survey completed through Google Forms. The purpose of this causal-comparative study is to examine the perception of safety of teachers who work at a school that allows teachers/administrators who have completed the 120 hours of training to concealed carry on campus versus those who do not have such a policy. With the need to keep academic institutions a safe place, exploring the perceptions of safety on a campus that allows concealed carry guides other academic institutions to make decisions about their safety protocols and the effects their decision has on their district. Several studies have examined students' perspectives, but little research has been covered on teachers' perspectives. Understanding the perspectives of teachers is vital, since they are the individuals who could be carrying a concealed carry weapon to protect the staff and their students in their district.

Before you make your final decision about consenting to this study, please read the following:

- Participation is completely voluntary.
- Participants are granted confidentiality and anonymity in their responses.
- The survey will take approximately ten minutes of their time.

This study has been reviewed and approved by the RRB Committee at Southwest Baptist University. If you do grant permission, I would share my data with you, if you would like to receive it. Please feel free to email with any questions you may have.

If you consent for me to conduct this research within your public K-12 school district, please sign below, scan, and email back to me.

\_\_\_\_\_  
Print Name

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature

I greatly appreciate your consideration of my request,

Jason C. Koele  
Doctoral Candidate, Southwest Baptist University

## Appendix G

### Follow-Up Correspondence

Good Morning,

My name is Jason Koele and I am a Doctoral student at Southwest Baptist University. I am currently working on my dissertation about educators' perceptions of safety in Missouri public K-12 schools that allow teacher concealed carry versus those that do not have such a policy. I understand that you are very busy during this time of year. Please know I would greatly appreciate it if you could complete this quick survey.

**Before you make your final decision about consenting to this study, please read the following:**

- Participation is completely voluntary.
- Participants are granted confidentiality and anonymity in their responses.
- The survey will take approximately 8 to 10 minutes of your time.

This study has been reviewed and approved by the RRB Committee at Southwest Baptist University. Please feel free to email ([jkoele@skylineschools.net](mailto:jkoele@skylineschools.net)) with any questions you may have. I greatly appreciate your consideration of my request and hope you are able to complete the survey!

[Survey Link](#)

Thank you and have a blessed week,

Jason C. Koele  
Doctoral Candidate, Southwest Baptist University