DIFFERENCES BETWEEN EMPLOYEES' PERCEPTIONS OF SAFETY REGARDING CONCEALED CARRY ON PUBLIC CAMPUSES IN UTAH AND TENNESSEE

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

DIFFERENCES BETWEEN EMPLOYEES' PERCEPTIONS OF SAFETY REGARDING CONCEALED CARRY ON PUBLIC CAMPUSES IN UTAH AND TENNESSEE

Presented by Alyssa McClain Stock a candidate for the degree of Doctor of Education and hereby certify that in their opinion it is worthy of acceptance.

Edward W. Walton

Dr. Edward W. Walton, Advisor/Chair
Dean Emeritus, University Libraries

Tammy D. Condren

Dr. Tammy Condren, Committee Member
Associate Professor, Graduate Studies in Education

Dr. Benny Fong, Committee Member
Assistant Professor, Graduate Studies in Education

DIFFERENCES BETWEEN EMPLOYEES' PERCEPTIONS OF SAFETY REGARDING CONCEALED CARRY ON PUBLIC CAMPUSES IN UTAH AND TENNESSEE

_____

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

_____

In Partial Fulfillment
of the Requirements for the Degree

Doctor of Education

_____

By

Alyssa McClain Stock, B.S., M.S., Ed. Spec.

Dr. Edward W. Walton, Dissertation Advisor

May 2022

ACKNOWLEDGMENTS

Great things are not done by impulse, but by a series of small things brought together.

-Vincent Van Gogh

I was the youngest and the only teacher in my cohort of principals and superintendents. Many in my situation would have been intimidated but I saw it as an opportunity. I soaked up all the knowledge each of my classmates had and I became a more knowledgeable and polished individual. It took a village for me to complete this dissertation, and some may think they did not have a part in it, but every small piece of encouragement propelled me to finish.

First, I would like to acknowledge my son, Slade; you may not have been here at the start of my dissertation journey, but you made the journey even more meaningful to accomplish. To my husband, Brad, your belief and patience through this process will always be appreciated. I know that you had to do the work of two parents sometimes and I missed family functions and date nights in order to finish. Despite all your sacrifices, you never gave up on me or complained, you just smiled and said, "You can do it!"

Two individuals that have been by my side encouraging and always pushing me to strive for my goals are my beloved parents. My parents raised me to be an individual who does not give up in times of adversity and to know the value of an education. Mom, I am grateful for every phone call of happiness or frustration that you took the time to listen to at all hours of the night, where you would reassure me that I could accomplish this dream. Dad, your constant push for me to continue and our drives to weekend classes meant the world to me. Both of you have endured my tears and happiness on this journey; know that I admire both of you in how much strength you have in yourselves

and the strength that you have passed on to me. To my little sister, Kayla, I have always strived to be a leader like you; I watched as you climbed in the professional world and I wanted you to know that you gave me the courage to earn my doctorate.

Sadly, my grandma passed away before she could see me finish. During the first years of my dissertation, driving every other weekend was going to be terrible and lonely, but I looked forward to the drive knowing it meant I was going to get to talk with my grandma. A special thanks to my friend and colleague, Dr. Valentino; you are my rock at school and your guidance and compassion towards me are greatly appreciated.

A sincere thanks to my advisor, Dr. Walton, who has been a constant source of encouragement throughout this process. I may have wanted a simple answer from Dr. Walton but he always pushed my way of thinking and I am grateful he did. Dr. Condren, you always encouraged me to be a better learner in class and a better writer. We both know that at the beginning of this journey I was not a strong writer, but you always provided supportive feedback and I can now say I am a stronger writer. Dr. Fong, I appreciate your patience and quick feedback at every point in the process, which always kept my momentum going.

Southwest Baptist University Cohort #7, from Day 1 you taught me so much and built my confidence as a future leader. I have completed this journey and I know each of you will as well—Good Luck!

TABLE OF CONTENTS

LIST OF TABLES

ABSTRACT

The problem is staff fear being involved in the next campus shooting, which has pushed campus safety experts to update safety policies and procedures. One of the policies being addressed is the option of allowing concealed carry on campus (CCOC). However, allowing CCOC makes some staff feel less safe. The purpose of this causal-comparative study was to test the theory of protection and the cognitive appraisal theory that compared perceptions of safety of employees who worked at public colleges in the state of Tennessee that only allowed employees with a concealed carry permit to conceal carry versus public colleges in the state of Utah that allowed anyone with a concealed carry permit to conceal carry on campus. The two theoretical frameworks that explain how individuals perceive fear and how they respond to stressful situations are the cognitive appraisal theory and the protection motivation theory, respectively The cognitive appraisal theory explains why an individual feels unsafe and the protection motivation theory depicts how individuals respond in an unsafe situation. This research addressed a gap in literature. There have been many studies about student perceptions of safety on campus; however, there has been very little research on employees' perceptions of safety on campus and specifically related to concealed carry. Understanding the perspectives of employees is vital, since the employees are the individuals who could be carrying a concealed carry gun on campus. The data showed that participants perceived feeling safer and less victimized on academic institutions in Utah, which allows anyone with a concealed carry license to CCOC. In this study, participants who worked on rural campuses perceived feeling safer and less victimized compared to participants who worked on urban campuses. The size of the academic institution and if the participant

was either part-time or full-time had little effect on perception of safety. 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 institution as a whole.

CHAPTER ONE

INTRODUCTION

With the proliferation of school shootings, educational systems have had to focus time and resources on securing the safety of their students and employees. Understanding how previous campus shootings and the possibility of future shootings affect perceptions of safety of campus employees is critical to promote effective campus safety policies. The perceptions of employees were examined through the lens of the cognitive appraisal theory and protection motivation theory (Lazarus, 1966; Rogers, 1975). The Columbine High School massacre (Schildkraut & Hernandez, 2014), Virginia Tech College shooting (Nedzel, 2014; Wofford, 2017), and Sandy Hook Elementary School (Greenberg, 2019) shooting are three events that brought new awareness of safety concerns to academic institutions. Due to these school shootings, employees' perceptions of safety on college campuses may have been altered. In response to campus shootings and perceptions of safety being questioned, academic institutions were forced to increase safety protocols and procedures (Wood, 2014). One component of the increased protocols was instituting a concealed carry policy. Academic institutions must decide whether to allow or prohibit concealed carry on campus (CCOC; Wood, 2014). Concealed carry is not a new concept of safety. Each state has written laws related to public concealed carry, including established places where concealed carry is against the law (Sandersen, Kupczynski, Mundy, & Gibson, 2018; Somers & Phelps, 2018). Gun violence is a national issue and impacts all levels of education. While proponents for and against concealed carry disagree on how best to protect students, both sides have the same goal of keeping campuses safer (Ponder, 2018). The purpose of this study was to

identify whether employees had a difference in perception of safety when their institution only allowed employees to concealed carry versus institutions that allowed anyone with a concealed carry license to carry on campus.

When perceptions of safety are altered, discussion begins as to which laws and policies the government could pass in order to improve the perception of safety. Political divide over gun control becomes the center of discussion after a school shooting occurs (McQuiller, 2019). After a publicized incident involving weapons happens it is the impetus for lawmakers to strengthen gun control laws. As a result of these discussions, federal, state, and local governments have enacted policies and laws to curtail gun violence in schools, beginning with Gun-Free School Zones Act (GFSZA) and Gun-Free Schools Act (GFSA), which were implemented in 1990 (Katsiyannis, Whitford, & Ennis, 2018; McQuiller, 2019; Nedzel, 2014). After the 2012 Sandy Hook mass shooting, President Barack Obama signed 23 executive actions, including planning guides for schools to prepare academic institutions for active shooter scenarios (Katsiynnis et al., 2018; McQuiller, 2019). The Federal Bureau of Investigation identified campuses as vulnerable targets for a mass shooting because they do not allow weapons on campuses (Nedzel, 2014). Since campuses do not allow weapons, it leaves students and employees defenseless against an armed assailant (Hsiao, 2018). In conjunction with campuses being identified as vulnerable targets for a mass shooting, the state of Colorado in 2012 allowed CCOC, based on the Concealed Handgun Carry Act that was enacted in 2003 (Sandersen et al., 2018). If another mass school shooting is experienced, lawmakers may seek to add new laws to ensure the safety of students.

Federal, state, and local laws impact and/or legislate gun control policies that academic institutions implement. Gun control policies are influenced by partisan politics, lobbying groups, and media groups (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Price et al., 2014; Richards, 2017). The decision to allow individuals to carry a concealed gun on campus is one of the recent safety options academic institutions have been forced to address (Price et al., 2014; Shepperd, Pogge, Losee, Lipsey, & Redford, 2018). Concealed carry incites the topic of gun control, a prevalent topic in politics where both sides believe they are correct based on their own perceptions. Gun rights individuals state that it is an individual's right to protect themselves from an active shooter. The two main proponents for concealed carry are the National Rifle Association (NRA) and Students for Concealed Carry (SCCC; Arrigo & Acheson, 2016; Wofford, 2017). Both organizations believe that weapons in the right hands will deter crime and should be used in an active shooter scenario. Contrarily, gun control individuals believe that more guns create more crime. The Brady campaign and Students Against Guns in Education (SAGE) are the two main proponents against CCOC (Arrigo & Acheson, 2016; Kamal & Burton, 2018). Anti-gun control or anti-rights activists state that allowing CCOC would endanger more people, there could be accidental shootings, and the school environment would be negatively affected. Gun rights individuals indicate a feeling of safety with CCOC, while gun control individuals indicate CCOC increases a feeling of danger. However, both groups agree that their main goal is to make campuses safer.

To evaluate the perceptions of safety, two theories were utilized to assess the employee perceptions. The two theoretical frameworks supporting this study were the

cognitive appraisal theory and protection motivation theory. An individual's environment and prior experiences develop their perception of safety. The protection motivation theory explains how the academic institution's environment affects an individual's perception of safety. The cognitive appraisal theory explains how prior experiences affect the individual's perception of safety on a campus that allows concealed carry. Richard Lazarus (1966) argued that how we perceive events in life has direct psychological effects and mental events have biological outcomes. Applying the cognitive appraisal theory, Rogers (1975) argued that an individual would calculate when a threat is high enough to use their concealed gun as their coping process to decrease the odds of harm happening to them. Applying both frameworks better examined the level of safety employees perceived feeling on campuses with or without concealed carry in place.

When a school shooting occurs, academic institutions evaluate the details of the shooting incident and upgrade their procedures to address potential deficiencies in safety protocols. There are proponents and opponents of CCOC that have influenced gun legislation impacting campuses' choice of allowing CCOC. Policies will continue to be passed after a mass shooting to ensure the perception of safety. To understand employees' perceptions of safety, two theoretical frameworks, cognitive appraisal theory and protection motivation theory, were used to explain how perceptions are formed. In addition, the differences of perceptions of safety on campuses that allowed and prohibited CCOC were compared between rural and urban campuses, large and medium campuses, and full-time and part-time staff. The interest of this study was to examine whether there were differences in perceptions of safety of employees who worked at a campus that

allowed anyone to carry concealed guns versus employees working at a campus that only allowed employees to carry concealed guns. Academic institutions can use the knowledge gained from this study to evaluate their current concealed carry policy. Several studies have examined students' perspectives of CCOC, but little research has explored employees' perspectives. It is important to have employees' perceptions because they are the individuals who could be carrying a concealed gun themselves if their campus allowed concealed carry.

Theoretical Framework

People develop their perception of safety on campuses, in part, based on whether or not concealed carry is allowed and by whom. There are two theoretical frameworks that explore how people perceive safety. The cognitive appraisal theory examines how individuals respond in a stressful situation and recognizes that for an individual to feel stress that person must perceive he or she is in danger (Jiang, 2017; Lazarus, 1966). The protection motivation theory identifies four factors associated with the concept of fear, which examines an individual's perceived severity of threat, their vulnerability, tools they have to handle the situation, and perceived self-efficacy (Rogers, 1975). Each of these frameworks provides the background for understanding why an individual feels unsafe and how they respond to an unsafe situation.

To understand how cognitive appraisal theory and protection motivation theory apply to employees' perceptions of safety on campus, a short discussion of each theoretical framework is necessary. Richard Lazarus stated in the cognitive appraisal theory that in order for an individual to feel stress he or she must have a perception that there is an imbalance in the demand of a behavior and the ability for the individual to

deal with the demand (Jiang, 2017; Lazarus, 1966). There are two parts to the appraisal process: primary appraisal and secondary appraisal. During the primary appraisal process, an individual perceives the stressors in the situation, whether the stressors are positive or negative, and whether they will affect them (Jiang, 2017; Lazarus, 1966). During the secondary appraisal process, an individual evaluates the resources available to handle the situation and whether they can cope effectively to the situation (Jiang, 2017; Lazarus, 1966). Lazarus (1966) argued that how we perceive events in life has direct psychological effects and mental events have biological outcomes. If an individual has seen someone die with the use of a gun, they may have a biological outcome of fearing weapons because of the effects of that mental event (Lazarus, 1966). During this process, the individual will evaluate who they perceive should be responsible for either the negative outcome or the positive outcome.

The protection motivation theory depicts individuals feeling motivated to protect themselves rather than feeling the emotion of fear. Rogers (1975) espoused the protection motivation theory, a social cognitive theory, based on Lazarus' (1966) cognitive appraisal theory that identified how people behave and cope during stressful situations. Rogers identified two components to the protection motivation theory. The first component is the threat-appraisal process (Rogers, 1975). The threat-appraisal process is broken into three parts: severity, vulnerability, and reward. Severity is the degree of potential harm the individual will endure from an incident or behavior. Vulnerability is the probability that harm will come to the individual from an incident or behavior. Reward is the positive aspect that will come to the individual from the behavior. The degree of threat is based on a combination of the severity and vulnerability

of the incident or behavior minus the reward (Rogers, 1975). The second component is the coping-appraisal process (Rogers, 1975). The coping-appraisal process is broken into three parts as well: response efficacy, self-efficacy, and the response cost. Response efficacy is the effectiveness of an individual's response in decreasing harm. Self-efficacy is the individual's belief that they can perform the behavior to reduce the threat of harm. The response cost is the extra cost, physical or psychological, the individual will have to endure to complete the behavior that will decrease the probability of harm. The amount of coping ability an individual possesses is the combination of response efficacy and self-efficacy minus the response cost (Rogers, 1975).

Self-efficacy is the aspect most relative to the protection motivation theory for this study. A campus may allow concealed carry, but it is the employees' decision to carry and use the weapon in response to a threat that is the self-efficacy part of the protection motivation theory. An employee who carries a concealed gun on campus believes with the use of their weapon they can reduce the threat of harm occurring to them (Hsiao, 2018; Shepperd et al., 2018). The protection motivation theory depicts individuals feeling motivated to protect themselves over feeling the emotion of fear.

As a theoretical framework, protection motivation theory provides a strong basis for this research. The perception of safety is the threat-appraisal process and the decision to allow concealed carry on the campus is the coping-appraisal process of the possibility of a school shooter. Thus, an individual may cognitively feel safer carrying a concealed gun (Lazarus, 1966). The individual has calculated when a threat is high enough to use the concealed gun as their coping process to decrease the odds of harm happening to them (Rogers, 1975). The perception of safety means the individual does not have the

fear of harm while on campus. Fear is an emotion (Merianos, King, & Vidourek, 2017). When an individual sees or hears about mass shootings on college campuses, the individual examines their own campus to determine how safe they are and what resources the campus has to protect them (Rogers, 1975). For some individuals, a possible resource is to work on a campus that allows concealed carry (Somers & Phelps, 2018). A perception of safety is based on an individual's environment; for example, people feel safer during the day when they can see their surroundings clearly and feel more unsafe at night when their environment is harder to see (Malone & Steidley, 2019). An individual's environment assists in developing their perception of safety; therefore, this study examined the differences in the perception of safety between urban and rural area colleges, large and medium campuses, part-time and full-time staff, and campuses with different concealed carry policies.

Perceptions can change as situations evolve and environments alter. Both frameworks explain different parts of how perception of safety is developed. The cognitive appraisal theory explains why an individual feels unsafe and the protection motivation theory depicts how individuals respond in an unsafe situation. Why an individual feels safe or unsafe may be due to their prior experiences or their current environment, which is why the researcher examined the gun ownership background of each respondent and previous involvement in violent crimes. If a mass shooting were to occur on campus, understanding how individuals might respond may explain the reasoning behind their perception of safety on a campus that allows concealed carry. Understanding both how people develop their perception of safety and in which environments individuals say they perceive safety allowed the researcher to have more

specific understanding on the perception of safety based on a campus's concealed carry policy.

Problem Statement

Employees on college campuses should not constantly be in fear of a mass shooter taking their life. When the mass shooting at Virginia Tech occurred, society changed, and academic institutions had to adapt. One current issue in education is that of security on campus (Nedzel, 2014; Wofford, 2017). For decades weapons have been on campus in the hands of security guards, however, some academic institutions are now allowing individuals with a license to carry a concealed gun on campus (DeMitchell & Rath, 2019; Thompson, Price, Dake, & Teeple, 2013). Campuses must examine their resources and safety options to prepare for the protection of their staff and students during possible instances of an active shooter on campus (Hsiao, 2018; Nedzel, 2014). Some academic institutions have begun allowing concealed carry in hopes that an armed individual will intercept and disable a mass shooter and save lives (Arrigo & Acheson, 2016; Wofford, 2017). The shooter could be deterred from coming on campus because of the possibility of encountering a person who is armed (Arrigo & Acheson, 2016; Wofford, 2017). A mass shooter can fire one bullet every second, with the average police response team arriving in 4 minutes, which means 240 people could potentially be hit (Nedzel, 2014). The question that remains unanswered is whether an individual feels safer on campuses that allow concealed carry (DeMitchell & Rath, 2019).

The problem is staff fear being involved in the next campus shooting, which has pushed campus safety experts to update their policies and procedures. One of the policies being addressed is the option of allowing CCOC (Nedzel, 2014; Price et al., 2014).

However, allowing CCOC makes some staff feel less safe (Minshew, 2018; Price et al., 2014; Wofford, 2017). The focus of this study was to examine the difference in the perception of safety that employees felt when only employees could carry concealed guns on campus versus students being able to do so. In addition, the study examined whether there were differing perceptions of safety between staff at rural and urban academic institutions, large and medium campuses, and part-time and full-time staff. The researcher looked specifically at whether an individual's perception of safety was different on campuses where all individuals with a license could carry concealed guns versus those on campuses where only staff could do so. In summary, this study examined the perceptions of safety related to CCOC between staff that worked in public colleges and universities in Utah and Tennessee through the lens of the protection motivation theory and the cognitive appraisal theory.

Purpose of Study

The purpose of this casual-comparative study was to examine the perceptions of safety of employees who worked at colleges that only allowed employees with a concealed carry permit to carry concealed guns versus colleges that allowed anyone with a concealed carry permit to carry on campus. The research was conducted at public academic institutions in Tennessee and Utah. These two states had different laws about who was permitted to conceal carry on campus. Utah allowed any individual that had a concealed carry permit to carry on campus. Tennessee only allowed employees with a concealed carry permit to carry on campus. The study used the protection motivation theory and cognitive appraisal theory to explain the perceptions of safety behind the research. There has been a lot of research studying the perceptions of students, but little

on the perceptions of employees (Bishop, 2019; Hassett, Kim, & Seo, 2020; Schildkraut, Carr, & Terranova, 2018).

Research Questions

In order to examine the perceptions of safety of employees pertaining to CCOC, the researcher explored four research questions. The independent variable was who was allowed to carry concealed guns on campus, employees versus anyone with a concealed carry license. The dependent variable of each research question was employees' perceptions of safety on campus. The researcher used a survey that included a Likert scale to quantify employees' perceptions of safety. The research questions that guided the study were as follows:

1. What is the difference in employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    a. What is the difference in employees' perceptions of campus violence and victimization on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    b. What is the difference in employees' perceptions of support and conditions of CCOC where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    c. What is the difference in employees' perceptions of safety with guns on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

2. What is the difference in employees' perceptions of safety on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    a. What is the difference in employees' perceptions of campus violence and victimization on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    b. What is the difference in employees' perceptions of support and conditions of concealed carry on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    c. What is the difference in employees' perceptions of safety with guns on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
3. What is the difference in employees' perceptions of safety on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    a. What is the difference in employees' perceptions of campus violence and victimization on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

b. What is the difference in employees' perceptions of support and conditions of concealed carry on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

c. What is the difference in employees' perceptions of safety with guns on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

4. What is the difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

   a. What is the difference in part-time versus full-time employees' perceptions of campus violence and victimization on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

   b. What is the difference in part-time versus full-time employees' perceptions of support and conditions of CCOC where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

   c. What is the difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

Null Hypotheses

1. $H_0$1: There is no statistically significant difference in employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
2. $H_0$1a: There is no statistically significant difference in employees' perceptions of campus violence and victimization on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
3. $H_0$1b: There is no statistically significant difference in employees' perceptions of support and conditions of CCOC on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
4. $H_0$1c: There is no statistically significant difference in employees' perceptions of safety with guns on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
5. $H_0$2: There is no statistically significant difference in employees' perceptions of safety on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
6. $H_0$2a: There is no statistically significant difference in employees' perceptions of campus violence and victimization on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.

7. $H_0$2b: There is no statistically significant difference in employees' perceptions of support and conditions of concealed carry on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
8. $H_0$2c: There is no statistically significant difference in employees' perceptions of safety with guns on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
9. $H_0$3: There is no statistically significant difference in employees' perceptions of safety on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
10. $H_0$3a: There is no statistically significant difference in employees' perceptions of campus violence and victimization on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
11. $H_0$3b: There is no statistically significant difference in employees' perceptions of support and conditions of concealed carry on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
12. $H_0$3c: There is no statistically significant difference in employees' perceptions of safety with guns on large campuses versus medium campuses where only

employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.

13. $H_0$4: There is no statistically significant difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
14. $H_0$4a: There is no statistically significant difference in part-time versus full-time employees' perceptions of campus violence and victimization on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
15. $H_0$4b: There is no statistically significant difference in part-time versus full-time employees' perceptions of support and conditions of CCOC where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
16. $H_0$4c: There is no statistically significant difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.

Limitations, Delimitations, and Assumptions

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

Limitations. The limitations of this study were factors that could have influenced the study and data collected. The researcher had no ability to control the outcome of the limitations listed. The possible limitations of the study were as follows:

1. The bias of a participant personally impacted by the trauma of a mass shooting was a limitation.
2. The bias of a participant with a strong pro or anti concealed carry position was a limitation.
3. The participants providing inaccurate data through self-reporting was a limitation.
4. Participants responding with what they considered to be the "right" answer and not their own perceptions was a limitation.
5. Participants having different interpretations of questions was a limitation.
6. The number of returns was a limitation.

Delimitations. Delimitations were the intentional choices made by the researcher to outline the boundaries of the study. The delimitations were created to establish internal and external validity. The delimitations of this study were as follows:

1. Not seeking student perceptions of safety on campuses that allow concealed carry was a delimitation.
2. Surveying academic institutions that had allowed concealed carry for varying amount of years was a delimitation.
3. The focus on the states of Utah and Tennessee based on statewide uniform concealed carry laws was a delimitation.

Assumptions. This study assumed the following:

1. It was assumed that each participant would answer the survey questions honestly and without bias.
2. It was assumed that the generalizability was to employees who worked at public academic institutions in the states of Utah and Tennessee.
3. It was assumed that the theoretical framework was an accurate reflection of the phenomena being studied.
4. It was assumed that the analysis selected and size of sample were sufficient to detect significant differences/relationships.

Design Controls

A casual-comparative research study was used to collect quantitative data to determine whether there were differences in employee perceptions of safety on campuses that allowed only staff to carry concealed guns versus on campuses that allowed anyone with a concealed carry license to CCOC. The independent variable was who was allowed to carry a concealed gun on campus, employees only or anyone with a concealed carry license. The dependent variable was the employees' perceptions of safety on campus. The researcher used the Perceptions Regarding Carrying Concealed Handguns on University Campuses survey (Thompson, Price, Dake, & Teeple, 2013), which has been tested for validity and reliability, to measure the perception of safety. In an attempt to increase response rates the researcher chose to send the survey electronically.

The researcher could not control all aspects of the research data collected. There was no way for the researcher to control the bias if a participant had been personally impacted or experienced a mass shooting. Participants may have had bias regarding their

stance on concealed carry that may have affected their responses to the survey questions. The questions on the survey may have had different interpretations, affecting the data collected. Since the survey was self-reported, participants may have answered questions with what they thought was the "right" answer and not their own perception. Each of these limitations could possibly have affected the data collected.

Participants were limited to employees working in public academic institutions in Utah and Tennessee. These states were chosen because state laws specified the concealed carry policy for public academic institutions. Other states had conflicting policies within the state itself and data collected would have been inaccurate. Thus, a design control for accurate data collection was to only collect data from institutions in Utah and Tennessee. State law in Tennessee only allowed employees to carry concealed guns on campus. State law in Utah allowed anyone with a concealed carry license to carry on campus. Within the state of Utah there were 10 public academic institutions included in the study. Within the state of Tennessee there were 24 public academic institutions in the study. There have been many studies on students' perceptions of safety; however, there were very few on employees' perceptions. Therefore, this study focused on only employees' perceptions of safety.

Included in this study, as a design control, was the guaranteed anonymity of all participants and the option for each participant to skip any question during the survey. Since the topic of gun rights was controversial, protecting the identity of the participants was intentional to potentially increase the number of honest and unbiased responses. The researcher assumed that participants would answer the survey honestly and without bias.

Definition of Key Terms

A list of key terms and their definitions for the purpose of this study are provided to ensure a deep understanding of the context of this study. The following key terms were defined as follows:

Active Shooter. An individual actively engaged in killing or attempting to kill people in a populated area (McQuiller, 2021).

Concealed Carry. The act or practice of carrying a concealed firearm in public on one's self (Bishop, 2019).

Conservative. A supporter of a conservative political party (Miller, 2019).

Democratic. Political party affiliated with more progressive policies, support of social equality, and notable support of gun control (Miller, 2019).

Gun Control. An attitude of an individual that supports the regulation of the selling, owning, and use of guns (Reich & Barth, 2017).

Gun Rights. An attitude of an individual that supports the Second Amendment (Reich & Barth, 2017).

Lockdown. An emergency measure in which individuals are temporarily confined to an area during a threat of danger (Schildkraut, Carr, & Terranova, 2018).

Mass Shooting. The death of three or more people in a single incident that did not arise out of gang violence (U.S. Concealed Carry Association, 2020).

May Issue. The issuing authority is able to use their discretion on issuing or denying an applicant a permit for an individual to possess a concealed carry license if all requirements are met (U.S. Concealed Carry Association, 2020).

Republican. Political party affiliated with reducing taxes to stimulate the economy, deregulation, and conservative social values including gun rights (Miller, 2019).

Shall Issue. The state must issue a permit for an individual to possess a concealed carry license if all requirements are met (Gius, 2019).

Staff. Individuals that work in an academic institution responsible for the internal operations of the institution (Somers & Phelps, 2018).

Summary

As higher education institutions deal with mass shootings, they must adopt new policies and procedures to combat these situations. One policy colleges and universities must consider is the institution's stance on CCOC(Hsiao, 2018; Minshew, 2018; Wofford, 2017). Regardless of whether the institution allows or prohibits CCOC, all academic institutions have the safety of their students and employees at the forefront of their safety concerns (Ponder, 2018). The purpose of this causal-comparative study was to test the theory of protection and the cognitive appraisal theory that compared perceptions of safety of employees who worked at public colleges in the state of Tennessee that only allowed employees with a concealed carry permit to conceal carry versus public colleges in the state of Utah that allowed anyone with a concealed carry permit to conceal carry on campus. The research addressed a gap in literature. There have been many studies about student perceptions of safety on campus; however, there has been very little research on employees' perceptions of safety on campus and specifically related to concealed carry.

The two theoretical frameworks that explain how individuals perceive fear and how they respond to stressful situations are the cognitive appraisal theory and the protection motivation theory, respectively. Using these theories in understanding individuals' perceptions of fear and how they might respond to stressful situations was important to help understand perceptions of safety on campus related to concealed carry. Cognitive appraisal theory explains how an individual may cognitively have the perception of safety when carrying a concealed gun (Lazarus, 1966). The perception of safety means the individual does not feel the need to protect themselves and harm is not present in their environment. The protection motivation theory recognizes individuals feeling motivated to protect themselves rather than feeling the emotion of fear (Rogers, 1975). According to the theory, an individual's coping mechanism for a potential active shooter is to carry a concealed gun. Thus, the individual feels safer on a campus that allows concealed carry and has calculated a threat to their safety may be high enough to use the concealed gun as their coping mechanism to prevent themselves from being harmed.

Colleges and universities endeavor to keep their campuses safe. One option academic institutions must consider in their safety policies is whether to allow CCOC (Duroni, 2019). However, concealed carry is a controversial issue in today's gun control environment (Miller, 2019). In the gun control conversation, the option to make academic institutions safer by allowing concealed carry is a hot button issue (Miller, 2019). With the need to keep academic institutions a safe places, exploring the perceptions of safety on a campus that allows concealed carry could assist academic institutions in making informed decisions about their safety protocols and their effects on

their institution as a whole (Wood, 2014). Specifically, understanding the perspectives of employees is important, since employees are the individuals who may be carrying a concealed carry weapon to protect themselves and their students (Hsiao, 2018).

Chapter Two of this paper will provide a review of the literature and the theoretical framework of existing research. The literature review is organized thematically beginning with the history of campus mass shootings, overview of gun control, and media during a mass shooting, and ending with concealed carry laws and policies. In Chapter Three, the researcher will describe the research design and methodology guiding the study. Chapter Four will contain the results of the data collected during the study and an analysis of the findings. Chapter Five concludes with a summary of findings and recommendations for further research.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

After a campus shooting occurs, employees' perceptions of safety are altered and feelings of insecurity or uncertainty of their safety increase. With campuses being identified as vulnerable targets for a mass shooting, some academic institutions have begun allowing CCOC(Hsiao, 2018). Each shooting creates a fear for employees that their campus could be the site of the next campus mass shooting, which affects the perception of safety (Silva & Capellan, 2019a). Understanding how previous campus shootings and the possibility of future shootings affect employees' perceptions of safety on campus is critical to promoting effective campus safety policies. The motivation for mass shootings has evolved from a revenge kill to fame-seeking shooters killing as many individuals as possible. After a mass shooting, new safety measures are put into place to increase the perception of safety. Some safety measures are straightforward, such as increasing the number of campus police officers, creating an emergency notification system, and developing a response plan (Bishop, 2019; Regehr, Glancy, Carter, & Ramshaw, 2017). Other safety measures are not as concrete, such as offering counseling after a mass shooting for victims and current students attending the academic institution.

Media coverage of a mass shooting is critical in how people perceive their own individual safety. How mass shootings are broadcast on the news shapes how the viewer perceives the event and creates discussion about increasing safety and legislative change (Cumiskey & Hjorth, 2019; Dahmen, 2018; Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a). Media coverage after a mass shooting affects policy change that leads to improving the

perception of safety on campuses. The Second Amendment of the U.S. Constitution is the focus of court cases that have led to policy changes on campuses allowing concealed carry. Supreme Court rulings have confirmed that the Second Amendment applies to individuals and not just militias (Atlas, 2019). Some state legislatures have been liberalizing concealed carry laws, which has propelled more campuses each year to permit CCOC (Bishop, 2019; Malone & Steidley, 2019; Vizzard, 2015). Each academic institution has a concealed carry policy that allows CCOC or bans it and additionally specifies who can carry on campus. Utah allows anyone to carry a concealed gun on all their public campuses and Tennessee only allows employees to do so (Bishop, 2019; Schildkraut, Carr, & Terranova, 2018).

People develop their perception of safety on campuses, in part, based on whether or not concealed carry is allowed and by whom. This study was guided by two theoretical frameworks, cognitive appraisal theory and protection motivation theory. Both frameworks explain different parts of how perception of safety is developed. Cognitive appraisal theory explains why an individual feels unsafe and protection motivation theory depicts how individuals respond in an unsafe situation (Lazarus, 1966; Rogers, 1975). If a mass shooting were to occur on campus, understanding how individuals would respond may explain their reasoning behind their perception of safety on a campus that allows concealed carry.

In hopes of improving the perception of safety on campus, college administrators implement new policies, including concealed carry aimed at improving perceptions of safety (McQuiller, 2019; Wood, 2014). The following review of literature explores five main topics: (a) the history of school shootings, (b) safety after mass shooting, (c) media

after mass shooting, (d) gun control laws, and (e) CCOC. Each main topic relates to the cognitive appraisal theory and the protection motivation theory. As more academic institutions implement concealed carry policies, exploring the perceptions of safety on a campus that allows concealed carry could assist other academic institutions in guiding their decisions about safety protocols.

Protection motivation theory provides a strong basis for this research (Rogers, 1975). The perception of safety is the threat-appraisal process and the decision to allow concealed carry on the campus is the coping-appraisal process of the possibility of a school shooter. Thus, an individual may cognitively feel safer carrying a concealed gun (Lazarus, 1966). When an individual sees or hears about mass shootings on college campuses, the individual examines his or her own campus to determine how safe he or she is and what resources the campus has to protect them. For some individuals, a possible resource is to work on a campus that allows concealed carry. Cognitive appraisal theory explains why an individual feels unsafe and protection motivation theory depicts how individuals respond in an unsafe situation (Lazarus, 1966; Rogers, 1975).

History of School Shootings

School shootings are not a recent phenomenon; the first documented mass shooting was in 1764 (The National Teachers Hall of Fame, 2020). There are multiple aspects from which school shootings could be examined. For this study, the shooter's motivation for harming others is the important factor to understand. From the first documented shooting in 1764, the motivation behind school shootings has evolved from revenge to notoriety (Katsiyannis et al., 2018; Ponder, 2018). Early shootings were for revenge, a personal motivation. These shootings resulted in few isolated deaths (Ponder,

2018). However, the motivation for recent shootings has been for notoriety, resulting in random, multiple casualties (Nedzel, 2014). Since the recent shootings have been for notoriety and are random events, anyone has the potential to be an unexpected victim. Applying the protection motivation theory to this incident, when individuals see or hear about mass shootings on other college campuses, they examine their own campus to assess their safety and what resources the campus has provided for their protection (Rogers, 1975). If an individual has calculated their campus is a high threat, the individual would use the concealed gun as a coping process to decrease the odds of being harmed. The phenomenon of shootings for notoriety has affected the perception of safety on a campus, resulting in academic institutions implementing a concealed carry policy to improve the perception of safety.

Revenge-motivated shootings. The motivation behind the earliest school shootings was revenge. The first documented school shooting, the Enoch Brown School Massacre, occurred on July 26, 1764 (The National Teachers Hall of Fame, 2020). A group of Native Americans killed nine children and the schoolmaster, Enoch Brown. In 1853, a student killed the schoolmaster as revenge for what he thought was excessive punishment of his brother the day before (Jensen, 2018). After being removed from campus for disobedience, the 20-year-old student killed his professor as revenge (Support Jeffco Kids, 2018). In 1887, a brother of a student killed his sister's teacher for whipping her the day before (Glavin, 2018). In 1920, a 14-year-old student shot his teacher, Beatrice Conner, for sending him to the principal's office ("Angered by teacher," 1920). An English instructor at Lehigh University was killed by a student for giving him a failing grade (Support Jeffco Kids, 2018). In 1951, the superintendent at the Alexander

School was killed by two current students whom he previously disciplined (St. Clair & Palmer, n.d.). The two students also killed the student who reported them to the superintendent. In each of these incidences, the motivation behind the school shooting was revenge. Thus, one might assume the motivation behind the majority of early school shootings was revenge, killing specific targets that had personally wronged the shooters (Ponder, 2018).

During the primary appraisal process of the cognitive appraisal theory, an individual perceives the stressors in the situation, such as the news of a school shooting (Jiang, 2017; Lazarus, 1966). During the secondary appraisal process, an individual evaluates the resources available to handle the situation (Jiang, 2017; Lazarus, 1966). After hearing the news of a school shooting an individual may see the concealed carry policy on campus as a resource to handle the situation of a possible shooter on their campus (Lazarus, 1966).

Notoriety-motivated shootings. In recent years, the motivation of school shootings has transitioned from revenge to notoriety. Each shooting has forced academic administrators to develop new tactics to react to the event and deal with the aftermath. The first major fame-seeking campus mass shooting was in 1966 on the University of Texas at Austin (UT-Austin) campus (Katsiyannis et al., 2018; Nedzel, 2014; Ponder, 2018). Charles Whitman hauled a trunk of rifles, pistols, and shotguns to the 28th floor of the campus's iconic tower and shot 48 people over the course of an hour and 36 minutes (Katsiyannis et al., 2018; Nedzel, 2014). While this event was not the first mass shooting in a school environment, it was the first shooting motivated by notoriety (Ponder, 2018). People all over the world were able to watch the massacre and felt they were part of the

incident, which created a panic among everyone, not only the individuals involved in the incident (Ponder, 2018). Since this shooting was publicized, people began to feel fearful of another shooting on a campus, which changed the perception of safety on campus (Shepperd et al., 2018). With the motivation shifting from revenge to notoriety, it affected people's perceptions of safety. This event was the first time notoriety was the primary motivation of the shooter, which made anyone in close proximity to the shooter a potential innocent victim (Shepperd et al., 2018).

After the UT-Austin shooting, school administrators were forced to rethink safety measures related to shooting events. There were several learning outcomes on how future mass shootings would be handled. First, how media discussed how it would cover future mass shootings, including the duration of media and the media's message as a result of the aftermath of the mass shooting (Cumiskey & Hjorth, 2019; Roman, 2019). Second, local police departments created contingency plans to help them deal with an active shooter scenario (King & Bracy, 2019; Martaindale & Blair, 2019*)*. The term *active shooter* became a common term for an armed intruder in a school rather than the term *intruder*, which did not identify if the intruder had a weapon (Martaindale & Blair, 2019). Third, Special Weapons and Tactics teams were created throughout the United States to deal with the potential of a future mass shooting event (Martaindale & Blair, 2019). The creation of police contingency plans and tactic teams was the first step in creating a relationship between schools and police (Martaindale & Blair, 2019). The UT-Austin shooting forced university administrators to develop new strategies to cope with active shooters, including developing plans to deal with media, making contingency plans

for police departments, and creating special weapons and tactical teams to engage an active shooter.

The next notable mass shooting was the Columbine High School shooting in Columbine, Colorado. Like the UT-Austin shooting, the primary motivation of the shooters was notoriety. Improved police procedures and public debate over gun control were two major outcomes addressed in the aftermath of this shooting. On April 20, 1999, the Columbine High School massacre occurred when two shooters killed 13 people (Schildkraut & Hernandez, 2014). Both shooters were students of the high school who wanted to cause the most deaths in U.S. history because they had been bullied at school (Schildkraut & Hernandez, 2014). The shooters felt the bullying was condoned by the school administrators because of their failure to act on instances of bullying (Schildkraut & Hernandez, 2014). The shooters committed suicide before they were apprehended.

Established procedures prevented first police officers who responded to the scene from entering the building, which enabled the shooters additional time to inflict more harm (Martaindale & Blair, 2019). Reacting to the delayed response, the Immediate Action Rapid Deployment tactic was created (Martaindale & Blair, 2019). This tactic allows police officers to enter a building and begin confronting the shooter rather than surrounding the building and waiting for specialized officers to enter. The new police procedures were developed to save lives. Police officers are now allowed to enter the building and engage an active shooter quicker with the hope of minimizing the number of victims.

Another outcome of the Columbine shooting was a very public and robust political debate over gun control. The weapons used in the shooting were purchased at a

gun show without a background check. The students had gone to a gun show and had their friend of legal age purchase the weapons for them (McQuiller, 2019). Due to how the shooters obtained the guns, the gun control debate that emerged in the aftermath of the shooting focused on closing the gun show loophole and mandating background checks to purchase a weapon (McQuiller, 2019). One outcome achieved from the Columbine shooting was the requirement to conduct background checks for gun purchases at gun shows.

Another outcome of the Columbine shooting was implementing safety protocols that helped schools detect and prevent weapons from entering the school facilities. The students/shooters were able to bring the weapons into the school without being noticed (McQuiller, 2019). Administrators recognized the need to install metal detectors to enable the detection of weapons in the possession of students (King & Bracy, 2019). As a result of this mass shooting, schools implemented metal detectors to decrease the ability for students to sneak weapons onto campus (McQuiller, 2019). A metal detector would notify the school if someone with a weapon was entering the building (King & Bracy, 2019; McQuiller, 2019).

The next major campus shooting was the Virginia Tech Massacre. The result of this event was a discussion of gun control based on mental illness. The Virginia Tech massacre occurred on April 16, 2007 (Greenberg, 2019; Phillips, 2018; Soboroff, Lovekamp, & Jenkot, 2019). Before committing suicide, the shooter shot and killed 32 people and wounded 17 others (Greenberg, 2019; Phillips, 2018; Soboroff et al., 2019). The shooter was previously diagnosed with selective mutism and severe depression, two mental illnesses (McQuiller, 2019). Gius (2019) recognized that mental illness is a

common theme when analyzing the instigator of a mass shooting. Due to federal privacy laws, personnel at Virginia Tech were unaware of the shooter's diagnosis. Since the shooter was not institutionalized, he was able to legally purchase weapons (Gius, 2019). In the materials left behind by the shooter, it was revealed that this individual saw the two shooters of Columbine as martyrs and identified with them as he was also bullied at school. This shooting was the impetus to enact federal laws that limited or controlled people diagnosed with a mental illness from being able to legally acquire a firearm.

The next major campus shooting was the Sandy Hook School shooting in Newton, Connecticut. The result of this shooting was a gun control debate around banning the sale of certain semiautomatic firearms and magazines with more than 10 rounds of ammunition (Greenberg, 2019). The second deadliest school shooting in history, the Sandy Hook Elementary School shooting ensued on December 14, 2012 (Greenberg, 2019). The 20-year-old shooter killed 26 people, including twenty 6- and 7-year old children (Greenberg, 2019). This shooter suffered from mental illness like the Virginia Tech shooter (McQuiller, 2019). Out of the gun control debate, the Secure Ammunition and Firearms Enforcement (SAFE) Act established universal background checks as part of the Brady Act (McQuiller, 2019). The Sandy Hook shooting was the incident that led to campuses allowing concealed carry (Greenberg, 2019). The Sandy Hook shooting was the tipping point of the debate to allow CCOC (Greenberg, 2019). Thus, the major outcome of the Sandy Hook School shooting was the enactment of a federal law that required a background check prior to purchasing a gun.

At the time of the research, the most recent major campus shooting was the Stoneman Douglas High School shooting in Parkland, Florida, which is commonly

referred to as the Parkland Shooting (Philpott-Jones, 2018). The Parkland shooting's aftermath was more of a verbal demonstration for new gun control laws with little demonstrable results. The Parkland Shooting happened on February 14, 2018 (Greenberg, 2019). A former student killed 17 people at Stoneman Douglas High School in Parkland, Florida (Greenberg, 2019; Minshew, 2018; Phillips, 2018). In response to the Parkland tragedy, the March for our Lives, a student-led demonstration, occurred on March 14, 2018, and the National School Walkout occurred on April 20, 2018, to advocate for more sensible firearm safety legislation (Greenberg, 2019; Minshew, 2018; Phillips, 2018). President Trump also verbally demonstrated his support of arming teachers when he suggested arming up to 20% of the teachers in a school (DeMitchell & Rath, 2019). This would enable teachers to stop shooters before police arrive (DeMitchell & Rath, 2019). The aftermath of this shooting was focused on the voices of the people demanding change through public demonstrations.

School shootings had occurred for centuries without instilling public fear of being a possible victim until the UT-Austin shooting, which was the first shooting that was publicly viewed using mass media (Katsiyannis et al., 2018; Ponder, 2018). Mass shootings have evolved from a revenge kill to fame-seeking shooters killing as many individuals as possible (Nedzel, 2014; Ponder, 2018). With the motivation transitioning to notoriety, anyone is a possible target, which increases the perception of fear (Ponder, 2018). The five notorious mass school shootings reiterated here led to policy changes for gun control. Specifically, the Sandy Hook shooting was the incident that led to campuses allowing concealed carry (Greenberg, 2019). The perception of safety is the threat-appraisal process of the protection motivation theory and the decision to allow concealed

carry on the campus is the coping-appraisal process of the possibility of a school shooter (Rogers, 1975). Thus, an individual may cognitively feel safer carrying a concealed gun. Cognitive appraisal theory explains why an individual feels unsafe and protection motivation theory depicts how individuals respond in an unsafe situation (Lazarus, 1966; Rogers, 1975). Each shooting creates a fear of being the next victim of a campus mass shooting and the perception of safety is affected (Silva & Capellan, 2019b).

Safety After Mass Shooting

Highly publicized shootings foster the perception that campuses are unsafe (Shepperd et al., 2018; Silva & Capellan, 2019a, 2019b). After a campus shooting occurs, employees' perceptions of safety are altered and feelings of insecurity or uncertainty of safety increase. Academic institutions' safety measures are evaluated after each mass shooting to improve safety and preparedness for the next possible incident. In hopes of improving the perception of safety on campus, college administrators implement new policies aimed at improving safety (McQuiller, 2019; Wood, 2014). One option administrators considered was allowing concealed carry on their campuses (Shepperd et al., 2018). Some safety measures can be implemented immediately and are visibly seen. However, many campuses overlook the emotional effects that a mass shooting creates for employees and students and fail to account for those hidden needs (Bishop, 2019). Not only do campuses implement new policies to improve the safety of the school, the state responds similarly with passing laws and policies to increase safety on campuses (Sandersen et al., 2018; Somers & Phelps, 2018). The perception of safety is the threat-appraisal process of the protection motivation theory and the decision to allow concealed carry on the campus is the coping-appraisal process of the possibility of a school shooter.

Thus, an individual may cognitively feel safer carrying a concealed gun. After a mass shooting, campuses need to decide how to effectively increase safety on their campus, which for some campuses may include allowing concealed carry.

UT-Austin shooting. After the UT-Austin campus mass shooting, security measures and media coverage were scrutinized and revaluated, leading to the creation of new safety plans (Russ, Jones, & Blankenship, 2018; Schildkraut, Carr, & Terranova, 2018). After the shooting, the school immediately prohibited access to the tower where the crime took place (Nedzel, 2014; Ponder, 2018). The campus had to close the tower because several people committed suicide from that location (Ponder, 2018). Individuals wanted to commit suicide in the tower in hopes of notoriety, since this was the scene where a notorious shooter killed himself (Ponder, 2018). With the scrutiny over safety measures after the shooting, the creation of safety plans resulted. One safety plan was the evaluation of the response time of the police ~~a~~nd the creation of contingency plans for local police departments for how to deal with an active shooter (King & Bracy, 2019). The contingency plan included protocols for the campus and local police department regarding communication and how each organization would respond to an active shooter (Martaindale & Blair, 2019). Another area scrutinized after the mass shooting was media coverage. Since this was the first televised shooting, media was scrutinized on its coverage of the crime (Ponder, 2018). Media coverage informs the public about a shooting and thus their method of coverage may influence public perception. Cognitive appraisal theory explains why an individual feels unsafe and protection motivation theory depicts how individuals respond in an unsafe situation (Lazarus, 1966; Rogers, 1975). Since the campus had no contingency plans created for an active shooter, individuals felt

fear. When the media reported the mass shooting on the television, more individuals became fearful of being a victim according to the cognitive appraisal theory. According to the protection motivation theory an individual may respond to their fear of being a victim by working on a campus where concealed carry is permitted. This mass shooting created new media coverage standards and safety plans.

Columbine mass shooting. Thirty-three years later the next school mass shooting occurred at Columbine High School (Kamal & Burton, 2018). Several aspects of this shooting were evaluated, including police response time, the purchasing of weapons, and safety measures schools implemented after this shooting (Kamal & Burton, 2018). When police response time is delayed, the delay allows the shooter more time for potential fatalities (Martaindale & Blair, 2019). For a shooter to kill people it requires a weapon and determining how shooters illegally obtained a weapon is important (Kamal & Burton, 2018). There are several different safety measures that schools put into place in order to deter an active shooter. In the aftermath of the Columbine mass shooting new safety measures were created to decrease the ability for an active shooter to enter a school unnoticed (King & Bracy, 2019).

The first safety aspect of the Columbine shooting addressed was the police response time entering the building. During this shooting, police officers waited to enter the building until specialized officers were on scene (Martaindale & Blair, 2019). The delay in apprehending the shooter increased the time for the active shooter to kill individuals (Kamal & Burton, 2018). Scrutiny of the police slow response time led to the creation of Advanced Law Enforcement Rapid Response Training (ALERRT) (Martaindale & Blair, 2019). This tactic instructs officers to enter buildings immediately

to confront a shooter rather than surrounding the school waiting for special units to enter (Martaindale & Blair, 2019). When police officers enter a building immediately to apprehend the shooter, that action decreases the time an active shooter has to cause harm (King & Bracy, 2019). This tactic saves potential lives and decreases the amount of time the active shooter has to kill innocent individuals before being confronted and disarmed (Martaindale & Blair, 2019). Thus, scrutiny of police slow response time and creation of ALERRT protocols were outcomes of the Columbine shooting.

The second safety aspect the Columbine shooting addressed was the ability of the shooters to acquire weapons used in the shooting. Investigation began on how underage individuals were able to obtain weapons. Unlike the shooter at UT-Austin, both of the Columbine shooters were underage and not legally able to purchase a firearm (McQuiller, 2019). The two shooters had a friend who was of legal age purchase the weapon at a gun show where background checks were not required (McQuiller, 2019). Due to how the shooters obtained the guns, the gun control debate that emerged in the aftermath of the shooting focused on closing the gun show loophole and mandating background checks to purchase a weapon (McQuiller, 2019). One outcome achieved from the Columbine shooting was the requirement to conduct background checks for gun purchases at gun shows.

The third safety aspect the Columbine shooting addressed was the safety measures schools implemented after this shooting. After the shooting, the school's safety measures were evaluated, and new safety protocols were created in an effort to deter an active shooter. One safety precaution schools took after the mass shooting was the implementation of metal detectors (King & Bracy, 2019; McQuiller, 2019). Schools

implemented metal detectors in order to detect a weapon when someone entered the building, bringing attention immediately to the threat (King & Bracy, 2019; McQuiller, 2019). Additionally, schools implemented a school uniform in response to the two shooters who wore trench coats concealing their weapons and bombs. From this perspective, some schools enforced a school uniform policy to make concealing a weapon more difficult and a way to identify if an individual is an intruder (White, 2019). Metal detectors and school uniforms do not prevent an active shooter; however, they do make the shooter plan accordingly, adding difficulties (King & Bracy, 2019). Since a potential shooter might be aware of these safety protocols, one may be deterred knowing they will be identified quicker. Each of these new safety protocols created after evaluating mass shootings made it more difficult for a future shooter to remain undetected, decreasing the amount of time available to cause harm.

The Columbine high school mass shooting led to the creation of safety plans that would potentially save future innocent people. Aspects of this shooting evaluated included police response time, purchasing of weapons, and safety measures schools implemented after this shooting. The creation of ALERRT was a positive outcome of the shooting. Measures promoted by ALERRT potentially save lives by decreasing the amount of time before the shooter is confronted and disarmed by an officer (Martaindale & Blair, 2019). For a shooter to be an active shooter they need a weapon; therefore, understanding how a shooter obtained a weapon is necessary to decrease future mass shootings. The implementation of metal detectors and school uniforms made it more difficult for an intruder to conceal weapons, thus being more identifiable as an intruder. Response efficacy, which is part of the protection motivation theory, is the effectiveness

of an individual's response in decreasing harm (Rogers, 1975). The implementation of new safety plans is the response efficacy that satisfies the requirements of the protection motivation theory. The evaluation of safety procedures after the mass shooting led to creation of new safety plans designed to save innocent lives.

Virginia Tech mass shooting. The next mass shooting to be evaluated and scrutinized was the Virginia Tech mass shooting, which occurred 8 years after the Columbine mass shooting. The topics discussed in the aftermath of this incident included gun control legislation and Virginia Tech's lack of an active shooter plan. The gun control legislation focused on how an individual with a mental illness was legally able to purchase a weapon. Virginia Tech's lack of an active shooter plan focused on the idea that the lack of a plan allowed increased time for the shooter to cause harm. The effects after the shooting led to gun control legislation being evaluated and the implementation of an active shooter contingency plan (King & Bracy, 2019).

The first aspect evaluated after the shooting was how the shooter with a mental illness was able to obtain a weapon. The shooter was of age and since he was not institutionalized, he was legally able to purchase the weapons (Gius, 2019). The ability for a mentally ill individual to legally purchase a weapon was scrutinized and this mass shooting was the incident that started the debate of gun control and mental illness and mental health legislation (Gius, 2019). Gun control legislation was changed in 1986 when the Firearms Owner Protection Act was enacted, which made it illegal for an individual with a mental illness to be able to purchase a weapon (McQuiller, 2019). This gun legislation was enacted because people who have a mental illness do not have the capabilities to make rational decisions (McQuiller, 2019). The Firearms Owner

Protection Act makes it illegal for a mentally ill person to legally purchase a weapon, which could prevent another mass shooting by a mentally ill individual.

In addition to the discussion on the ability of a mental ill person to acquire a gun, Virginia Tech was criticized for not having an active shooter plan in place. In the aftermath of this shooting, Virginia Tech put into place an emergency notification system and created threat assessment teams to create and practice lockdown procedures (Schildkraut, Carr, & Terranova, 2018). Arrigo and Acheson (2016) explained that, according to the Bureau of Justice Statistics of 2008, all campuses across the country were mandated to create an active shooter plan for their campus. Virginia Tech's plan included a 24-hour security patrol and installation of emergency blue-light phones located throughout the campus (Arrigo & Acheson, 2016; McQuiller, 2019). Emergency blue-light phones were brightly lit and allowed anyone to dial for help if they saw an intruder or needed help themselves. These phones increased the ability to communicate a threat to resources who could help, increasing the response time of police officers. Virginia Tech developed an active shooter plan that included the creation of an emergency notification system, formation of threat assessment teams, increased security patrols, and installation of blue-light phones.

The Virginia Tech mass shooting led to the creation of gun control legislation and the implementation of more visible safety aids for students and employees on campus. The gun control debate focused on mental illness and gun ownership, which led to new gun legislation. The mandate of having an active shooter plan was to increase the preparedness of campuses in the event of a future shooting (King & Bracy, 2019). The protection motivation theory explains that when an individual sees or hears about mass

shootings on college campuses, the individual examines their own campus to determine how safe they are and what resources the campus has to protect them (Rogers, 1975). During the secondary appraisal process of the cognitive appraisal theory, an individual evaluates the resources available to handle the situation and whether they can cope effectively to the situation (Jiang, 2017; Lazarus, 1966). The more resources a campus has as part of their safety plans, the more protected and safer an individual feels. When a school is prepared with an active shooter plan, they can respond quicker during a shooting, with the potential to save lives (King & Bracy, 2019). The 24-hour patrol and blue-light phones give any individual the power to communicate they are in danger, immediately increasing the response time of police officers. Each of these safety measure could increase the perception of safety.

Sandy Hook mass shooting. The next mass shooting to be evaluated and scrutinized was the Sandy Hook mass shooting. Several aspects of this shooting were evaluated, including gun legislation focusing specifically on laws about semiautomatic weapons and laws about background checks prior to purchasing a weapon, as well as the positive results of the implementation of active intruder protocols. Additionally, if mental illness had been a part of the background check prior to purchasing a weapon, it might have kept the shooter from Virginia Tech from being able to purchase a weapon legally (Gius, 2019; McQuiller, 2019). One positive aspect during the analysis of this shooting was the implementation of a previous safety measure, the active intruder protocol (King & Bracy, 2019). These takeaways from the shooting propelled new gun legislation.

The first aspect evaluated after the Sandy Hook mass shooting was the use of a semiautomatic weapon. Semiautomatic weapons allow for the shooter to fire one bullet with each pull of the trigger (Lord, 2019). Additionally, the shooter used gun magazines that held more than 10 rounds of ammo, which allowed for the shooter to shoot victims quicker, increasing the possible death toll (Greenberg, 2019). If the shooter had not had access to a semiautomatic weapon that had a magazine with more than 10 rounds in it, then the death rate would have been lower (Greenberg, 2019). In response to the mass shooting, certain semiautomatic weapons that held more than 10 rounds were banned for purchase (Katsiyannis et al., 2018). On February 20, 2018, President Trump directed the Department of Justice to issue regulations that banned bump stocks (U. S. Department of Justice, 2018). Bump stocks allow the shooter to utilize the recoil on the stock of a gun to increase the firing speed of a bullet. The outcomes from the Sandy Hook shooting were a ban of certain semiautomatic weapons and a ban of bump stocks, both of which increase the firing speed of a weapon.

The second aspect evaluated after the Sandy Hook shooting was background checks prior to purchasing a weapon. The shooter of Sandy Hook also suffered from mental illness, similar to the shooter at UT-Austin, the two shooters at Columbine High school, and the shooter at Virginia Tech (Gius, 2019). In response to the pattern of all the shooters having mental illness, the SAFE Act established universal background checks as part of the Brady Act (McQuiller, 2019). The background check includes asking the individual who is under oath to respond honestly if the individual has a mental illness (Philpott-Jones, 2018). If the individual marks that they do have a mental illness, then their request to purchase the weapon is denied and the individual will not be able to buy

the weapon legally (Philpott-Jones, 2018). If this law had been established prior to the Virginia Tech shooting, the shooter would have been unable to legally buy his weapon that killed innocent people during that mass shooting. The SAFE Act has made it illegal for individuals with mental illness, which is seen as a pattern in these shootings, to purchase a weapon (Gius, 2019).

The third aspect evaluated after the Sandy Hook shooting was the positive result of the implementation of active intruder protocols. Among the negative critiques after the shooting, there was a positive that emerged from the evaluation. The shooter was unable to enter a room if the teacher followed proper active shooter protocol. Active shooter protocol was created as aftermath of evaluations of previous school mass shootings (King & Bracy, 2019). With the shooter not being able to enter the room, all the children and teachers inside the locked room survived.

The Sandy Hook shooting allowed for new gun legislation to evolve. The legislation banning more than 10 rounds was designed to decrease the number of victims a shooter could potentially kill with a single magazine (Greenberg, 2019). The Brady Act added a mental illness consideration, which would keep individuals with mental illness from legally purchasing a weapon (Gius, 2019). And though there was negative criticism of gun policy, one positive observation was the school's use of proper active shooter protocol that saved numerous children from becoming victims (King & Bracy, 2019). Response efficacy, which is part of the protection motivation theory (Rogers, 1975), is the effectiveness of an individual's response in decreasing harm. The implementation of new safety plans is the response efficacy that satisfies the protection motivation theory.

The creation of new gun legislation and effective use of active intruder protocols could save future lives.

School versus campus safety changes after mass shooting. Safety plans created after each mass shooting differ for elementary and secondary schools as compared to colleges and universities (Lamoreaux & Sulkowski, 2020). There are four main focuses of this section. The first is the examination of why certain safety measures work more effectively in K-12 schools than colleges and universities (Hsiao, 2018). The second is the examination of how the GFSZA signs and concealed carry signs send different messages to a shooter (McQuiller, 2019). The third focus is why safety plans should include addressing the emotional side effects an individual suffers after a mass shooting (Ponder, 2018). The fourth and final focus is the idea that safety information about academic institutions be made public so prospective students or employees can make informed choices regarding colleges and universities and their safety plans (Schafer, Lee, Burruss, & Giblin, 2018). Safety plans created as an outcome from previous mass shootings are implemented differently in schools and academic institutions based on their effectiveness.

The first aspect of implementing new safety measures is examining the effectiveness of the safety protocol in schools and on academic campuses. One possible safety measure to implement is to limit access to a building through one entrance (Lamoreaux & Sulkowski, 2020). According to Hsiao (2018), many elementary and secondary schools typically have one building with one front entrance; however, most higher education campuses have open campuses with multiple buildings and multiple entrances. Since campuses have multiple entrances, they are harder to secure from an

intruder. Thus, limiting access to a building as a safety protocol is more effective in a school than on a campus (Hsiao, 2018). In addition, identifying intruders is easier in a school due to limited entrances and school uniforms; however, on an open campus with large number of students in plain clothing, it is difficult to identify who is an intruder (King & Bracy, 2019). The use of an intercom system is more effective in schools than on campuses (O'Leary, 2020). Schools can use the intercom system to alert the entire building about an active shooter as an additional safety measure. Contrarily, campuses do not have the ability to utilize an intercom system to alert individuals of an active intruder. Students on campuses are adults and have the legal ability to carry a concealed gun as a safety measure (Ward, Nguyen, & Nguyen, 2018). Since students in schools are underage to purchase weapons, this is not an effective safety measure at the school level. Certain safety measures work more effectively in schools due to the smaller size of the building compared to large open campuses. Safety is not a one-size-fits-all approach and must be implemented effectively based on the needs of building.

The second focus of this section is the examination of how the GFSZA signs and concealed carry signs send different messages to a shooter. If a school is a gun-free school zone, generally there is a sign noting that to any individual entering the building (McQuiller, 2019; Nedzel, 2014). Similarly, if a school allows concealed carry on its campus there is sign stating that to any individual entering the building. Both are signs stating their policy on guns but the message to a shooter is very different (McQuiller, 2019). The NRA's then Executive Vice President Wayne LaPierre explained that the GFSZA signs announce to the public that schools are the safest place for a shooter to commit a crime with the highest casualties (McQuiller, 2019). Because of the signage,

the shooter knows no one else besides a few identifiable police have a weapon to defend themselves (McQuiller, 2019). However, if the campus has a concealed carry sign this is a possible deterrent to an active shooter. The shooter would not know who had a concealed gun, which would possibly deter them from attempting to cause harm to others (McQuiller, 2019). Thus, for a potential shooter, the concealed carry sign is an indicator of the potential to encounter a concealed carrier.

The third aspect of implementing new safety measures after a mass shooting is addressing the emotional side effects a shooting may have on students and staff. There are different types of safety measures a campus may implement, including addressing the emotional side of an individual in order to increase their safety perception (Ponder, 2018). Some safety measures, however, are more straightforward, such as increasing the number of campus police officers, creating an emergency notification system, and response plans (Bishop, 2019). Schafer et al. (2018) noted that increasing the visibility of police presence on campuses may deter intruders while making others feel safer. Other safety measures are not as concrete but address the emotional side of how to increase an individual's perception of safety. Counseling after a mass shooting for victims and current students attending the academic institution is vital to improve an individual's perception of safety. For example, the UT-Austin set up a hotline as emotional support for all students and employees after a campus stabbing (Ponder, 2018). Another way students and staff may increase their perception of safety is awareness of the availability of safety personnel on campuses to help during a threat. Schafer et al. discovered that the proximity of a police station could increase or decrease students' and employees' need to protect themselves. Perception of safety for individuals includes addressing the

emotional side of victimization as well as awareness of the tools they have available to protect them (Merianos et al., 2017).

The fourth aspect of implementing new safety measures after a mass shooting is making safety information about academic institutions public. Campuses aiming to increase perceived campus safety need to provide safety information to the public (Merianos et al., 2017). Informing students about crimes occurring on campus reduces their perceived risk of becoming victims of crime (Merianos et al., 2017). Jeanne Clery, a student who attended Lehigh University, was raped and murdered in her dorm in 1986 (Schafer et al., 2018). Crimes were unreported at the time and her parents conveyed that if they had known the rape statistics of the academic institution, they would not have let their daughter attend (Schafer et al., 2018). Four years later, after much debate on the importance of improving perceptions of safety by providing an academic institution's safety information to the public, a law was passed (Schafer et al., 2018). This landmark law was passed in 1990. The Jeanne Clery Disclosure of Campus Security Policy, commonly called the Clery Act, was named after Jeanne Clery (Schafer et al., 2018). With information made public about safety statistics of a campus, an individual can make an educated decision about enrolling.

The Clery Act is a piece of legislation that provides the public with the safety statistics of every campus. This Act mandates academic institutions publicize crimes that have happened on their campus or the campus will lose their federal student financial aid programs (Clery Center, 2022). By October 1 of each year, colleges and universities must publish an annual security report that includes criminal homicide, sex offenses, robbery, aggravated assault, burglary, motor vehicle theft, arson, liquor law violations,

drug law violations, illegal weapons possession, larceny/theft, simple assault, intimidation, and destruction of property (Clery Center, 2022). The academic institutions are mandated to devise an emergency response, notification, and testing policy (Schafer et al., 2018). The Clery Act increased the visibility of crime on campuses for anyone inquiring about attending (Merianos et al., 2017). In addition to increasing the visibility of crime on campuses, the Office of Postsecondary Education of the U.S. Department of Education added the Campus Safety and Security Data Analysis Cutting Tool, which generates a customized report on college campus crime (Merianos et al., 2017). Each of these tools allows potential employees and students to have a transparent view of the school's safety procedures and crime statistics. With the safety data made public, an individual can make an informed decision of where to attend or work.

New safety plans created after each mass shooting were implemented differently in schools than academic institutions based on their effectiveness in each setting. To impact the perception of safety, the physical and emotional needs of individuals must be addressed (Ponder, 2018). Safety plans include being transparent of the crimes happening, addressing the emotional side a mass shooting creates, and implementing the most effective safety protocols based on the location (Schafer et al., 2018). Certain safety protocols are more effective on campuses, which is why campuses have considered the option of concealed carry as possible safety protocol. According to the cognitive appraisal theory, how individuals perceive life events has direct psychological effects and mental events have biological outcomes (Lazarus, 1966). If an individual has seen someone die with the use of a gun, he or she may have a biological outcome of fearing weapons because of the effects of that mental event (Lazarus, 1966). Contrarily, if an

individual has seen someone protect themself with a concealed carry weapon, he or she may not fear weapons and may feel safer with a weapon (Lazarus, 1966). The safety protocol of concealed carry will make some individuals feel safer and others more unsafe (DeMitchell & Rath, 2019).

Media After Mass Shooting

Media coverage of a mass shooting event plays a significant role in people's perceptions of the event. Media and social media have increased the perception that a mass shooting can happen anywhere at any time (Silva & Capellan, 2019b). There are three main areas that will be discussed about media after a mass shooting: the impact of perception of safety, amount of coverage, and the theory of contagion. People's impressions from the media coverage of mass shootings force legislative change and create discussion on how legislation should respond afterwards to improve safety (Cumiskey & Hjorth, 2019; Dahmen, 2018; Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Carr, & Terranova, 2018; Sidhu, 2017; Silva & Capellan, 2019b). In media, the motto is if it bleeds, it leads; this moto explains why mass shootings are covered continuously for the first few days (Silva & Capellan, 2019b). Contagion is the phenomena where continuous news coverage of a shooting event attracts other fame-seeking individuals to perpetrate a subsequent mass shooting (Dahmen, 2018; Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017). Media coverage of mass shootings has shifted from using the name of the killer to focusing on the victims to avoid contagion (Dahmen, 2018; Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017). The cognitive appraisal theory explains how during the primary appraisal process, an individual perceives the stressors

in a situation, thus the amount of media coverage creates a negative stressor that a shooting may happen to them (Lazarus, 1966). Media coverage and the amount of coverage a mass shooting is given is critical in how people perceive their own individual safety and the effects of contagion (Dahmen, 2018).

Media impact on perception. Media coverage of a mass shooting event plays a significant role in people's perceptions of the event (Silva & Capellan, 2019a). There are two main aspects to the media impact on perception of safety: the message the media provides, which influences legislation, and the platform on which the information is given. How mass shootings are broadcast on the news shapes how the viewer perceives the event and promotes the need to increase safety and make legislative change related to gun control (Cumiskey & Hjorth, 2019; Dahmen, 2018; Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a). Constant coverage of events creates the perception that mass shootings happen more frequently (Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a, 2019b). Most individuals will not personally be a part of a mass shooting and rely on media for their information (Cumiskey & Hjorth, 2019; Meindl & Ivy, 2017; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a, 2019b).

The message people hear is dependent on how media portrays a mass shooting. Watching reports about innocent children who die during a mass shooting generates very strong feelings about gun control (Schildkraut, Elsass, & Meredith, 2018). If the news focuses on the weapon and how it killed innocent children, then people tend to become angry and call for stricter gun laws. In contrast, if the news focused on armed teachers

saving innocent children from dying instead of guns killing children, then people might call for teachers to be armed instead of calling for gun control (Schildkraut, Elsass, & Meredith, 2018). The message then becomes how arming teachers could have saved innocent children and people call for arming teachers. Media coverage dictates public discussion, leading to corresponding policy change (Cumiskey & Hjorth, 2019; Dahmen, 2018; Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019b). Legislatures are more receptive to change after a mass shooting (Cumiskey & Hjorth, 2019; Dahmen, 2018; Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019b). The impact of the media portrayal of the shooting can change people's focus from the tragedy to prevention of the tragedy.

The perception of safety is greatly influenced by the media platforms available to relay the information. Individuals before the 21st century had few options to obtain their news with only the radio, news channels, and the newspaper, which typically covered local news. In the 21st century there are many social media platforms available, thus news travels faster and to more individuals (Cumiskey & Hjorth, 2019). Individuals have instant access to incidents that have happened all over the world (Cumiskey & Hjorth, 2019). With the bombardment of the world's entirety of news coverage being available, the perception that mass shootings happen more frequently occurs (Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019b).

Social media platforms have become a voice for the public to influence opinion and coordinate a response. Certain platforms are public and allow for individuals, not the media, to post their opinions on issues and influence others' opinion on what legislative

change is needed (Cumiskey & Hjorth, 2019). For example, in response to the Parkland mass shooting, people used social media platforms to organize a march and walkout to advocate for more sensible firearm safety legislation (Greenberg, 2019; Minshew, 2018; Phillips, 2018). In another example, teachers who opposed being armed used Twitter to start a conversation on the topic using the hashtag #ARMMEWITH, where teachers tweeted what they would rather be armed with instead of a gun (Minshew, 2018). These are two examples on how a media platform influenced people's opinions about a need for legislative change. Based on the popularity and reach of social media platforms, these platforms have the ability to influence the perception of safety and opinions on how legislation should improve safety.

An individual's perception of his or her safety is greatly impacted by the message the media provides them. The media coverage after a mass shooting leads to panic and fear in individuals who in response, demand gun control legislation (Cumiskey & Hjorth, 2019; Dahmen, 2018; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019b). Legislators respond to scared individuals after a mass shooting with new legislation that attempts to improve safety, which improves individuals' perceptions of their safety. The perception of safety is greatly dependent on the available media and social media platforms. The first component of the protection motivation theory is the threat-appraisal process (Rogers, 1975). The threat-appraisal process is broken into three parts, which are severity, vulnerability, and reward (Rogers, 1975). Severity is the degree of potential harm the individual will endure from an incident or behavior. Vulnerability is the probability that harm will come to the individual from an incident or behavior. Reward is the positive aspect that will come to the individual from the behavior. The

degree of threat is based on a combination of the severity and vulnerability of the incident or behavior minus the reward (Rogers, 1975). When individuals hear about mass shootings constantly, they feel more vulnerable to the probability of becoming a victim of a mass shooting themselves. When people only listen to local news their perception of safety is higher than that of individuals who have listened to national or international news (Dahmen, 2018).

Amount of media coverage. Media coverage is content including current events and news presented to the public. The coverage a story receives is based on how many potential viewers will watch a story (Dahmen, 2018; Meindl & Ivy, 2017; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a, 2019b). Mass shootings are the perfect topic to show continuously because it attracts the most viewers and increases the channel's ratings (Dahmen, 2018; Meindl & Ivy, 2017; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a, 2019b). The amount of coverage a story is given is also influenced by the location of the crime, if there were any survivors, and what other news stories are being presented.

The first aspect of media coverage is the examination of how coverage is based on the number of potential viewers. Media is "fast capitalism," meaning it is interesting enough to get viewers' attention (Dahmen, 2018; Meindl & Ivy, 2017; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a). If the media can make a story seem interesting enough, then more viewers will watch. Thus, the news is not solely for information but entertainment as well (Dahmen, 2018; Meindl & Ivy, 2017; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a, 2019b). When a mass shooting occurs, the media covers it day and night, showing graphic images

of the incident and interviewing crying bystanders captivates viewers (Silva & Capellan, 2019a, 2019b). The amount of media coverage a shooting is given is based on how many viewers it will attract (Sidhu, 2017). Higher death tolls, high numbers of injured, and the use of a weapon, especially an assault weapon, increases the media coverage (Dahmen, 2018; Meindl & Ivy, 2017; Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019a). However, there is less coverage if the shooter was killed as compared to when the shooter lived (Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019a). If the shooter lives, then the news can cover the court cases and remorse for the shooting (Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019a). Mass shootings provide the media with increased ratings because people are curious about what happened and watch continuously.

Several issues will impact the number of potential viewers a story will attract, including location, number of shootings occurring in a location, size of the community, and proximity to an election year. Shootings in the northeast have more media coverage and higher ratings because shootings in this region are rarer and people are shocked (Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019a). Since the south encounters more shootings, it is not as shocking to individuals to watch on the news and therefore the news coverage is reduced (Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019a). Similarly, where the shooting takes place and the size of the town will also impact the amount of media coverage a shooting receives. Because of the lower probability of a shooting occurring in a smaller city, media coverage tends to be greater when the shooting occurs there (Muschert, 2019; Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019a). The shooting being rarer increases the news worthiness and

ratings (Silva & Capellan, 2019a; Schildkraut, Elsass, & Meredith, 2018). Mass shootings that occur during an election year will also receive more media coverage (Schildkraut, Elsass, & Meredith, 2018). Individuals want to hear the response of the president and how the president will deal with gun control policies (Schildkraut, Elsass, & Meredith, 2018).

The cognitive appraisal theory explains how during the primary appraisal process, an individual perceives the stressors in a situation, whether the stressors are positive or negative, and whether it will affect them (Jiang, 2017; Lazarus, 1966). For example, a negative stressor would be an individual who is constantly watching news about a mass shooting and becomes fearful he or she will become a victim themselves (Jiang, 2017). Thus, if a school shooting receives significant coverage, the extended coverage increases the perception that school shootings occur frequently and increases one's fear of being involved in the next event. The frequency of media coverage has a direct effect on perception of individual safety.

Contagion. Contagion is the phenomena where continuous news coverage of a shooting event attracts other fame-seeking individuals to perpetrate a subsequent mass shooting (Dahmen, 2018; Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017). Contagion is influenced by how much coverage shooters are given by the media after a shooting. The "No Notoriety Campaign" was created to decrease contagion (Sidhu, 2017). The campaign was designed to encourage media outlets to focus on the victims and who they were, rather than the perpetrator, not naming the shooter (Sidhu, 2017). Contagion is something that the media can decrease by

focusing on the story and not the ratings (Meindl & Ivy, 2017). Contagion promotes other fame-seeking shooters to devise future mass shootings for notoriety.

When media outlets constantly cover a mass shooting and repeatedly identify the shooter, it gives the shooter exactly what he or she wanted, which is fame (Silva & Capellan, 2019b). Shooters are fame-seeking and strive for media attention that glorifies and idealizes violence, leading to subsequent shootings (Sidhu, 2017; Silva & Capellan, 2019a, 2019b). For example, in the UT-Austin shooting, the shooter sat in the tower for several hours before he fired because he was seeing the fame provided by the media coverage (Roman, 2019). Three months after the UT-Austin Tower shooting, contagion occurred when an active shooter emulating the shooter, killing five individuals (Nedzel, 2014). The shooter wanted to become known and make a name for himself. In another example, the news coverage of the Columbine shooting created contagion leading to the Virginia Tech shooting. The Virginia Tech shooter said that he saw the shooters of Columbine as martyrs. Media outlets should be cognizant of contagion and adjust their coverage of an event to minimize the potential effect (Nedzel, 2014).

When the media share a shooter's name it idolizes them and future potential shooters may seek the same fame (Meindl & Ivy, 2017). According to Meindl and Ivy (2017) one way to possibly decrease the attention given to a shooter after a mass shooting might be to reduce the duration of news coverage of the incident. In August 2015, following the Roanoke shooting, CNN made the decision to show killer-related material only once per hour, which is less than what would normally be shown (Meindl & Ivy, 2017; Sidhu, 2017). Family members of the victims of mass shootings became enraged that the media focus was on the shooter and not the victims (Silva & Capellan, 2019a).

For example, The Virginia Tech shooting had 538 front-page photos of the perpetrator and only 32 photos of the deceased victims (Dahmen, 2018; Silva & Capellan, 2019a). The No Notoriety Campaign was started by family members of Aurora Colorado Shooting victims to shift media to the victims instead of the perpetrators (Sidhu, 2017). Also, in order to reduce contagion effects such as giving media attention to fame-seeking shooters, the FBI joined Texas State University's ALERRT Center in a joint Don't Name Them campaign (Sidhu, 2017). The media might consider reversing the coverage, using the victims' recovery stories to get attention and increase ratings, thus presenting the shooters action in a negative light (Dahmen, 2018; Meindl & Ivy, 2017; Roman, 2019; Sidhu, 2017). If the media portrays the shooters in a negative light this could decrease the fame-seeking shooters. Media could make the conscious choice to limit the duration of news coverage of mass shootings while not naming or using pictures of perpetrators and instead elevating the names of the victims killed in order to decrease contagion (Dahmen, 2018; Meindl & Ivy, 2017; Sidhu, 2017).

Media influences the perception of safety. The continuous coverage of a mass shooting creates the perception that mass shootings happen more often than they statistically occur (Meindl & Ivy, 2017; Roman, 2019; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a, 2019b). Media coverage influences public fear and creates an opportunity for policy change (Cumiskey & Hjorth, 2019; Dahmen, 2018; Schildkraut, Elsass, & Meredith, 2018; Silva & Capellan, 2019a, 2019b). The amount of coverage a story receives is skewed to how many potential viewers will watch (Dahmen, 2018; Meindl & Ivy, 2017; Schildkraut, Elsass, & Meredith, 2018; Sidhu, 2017; Silva & Capellan, 2019a). There are two parts to the appraisal theory, primary

appraisal and secondary appraisal (Lazarus, 1966). During the primary appraisal process, an individual perceives the stressors in the situation, whether the stressors are positive or negative and whether it will affect them (Jiang, 2017; Lazarus, 1966). Constant media coverage could be a negative stressor that a shooting may happen to them. The manner and frequency with which media covers a mass shooting creates a ripple effect of contagion. Media has improved its practices to decrease contagion by placing the focus on the victims and not the shooter (Sidhu, 2017).

Gun Control Laws

When mass shootings or gun-related tragedies occur, it tends to reopen a public dialogue on gun control and leads to a push for new gun control legislation (Arrigo & Acheson, 2016). Three issues are routinely addressed in the push for new gun control legislation. The issues are the Second Amendment, major laws by political parties, and national organizations' influence in politics. The Second Amendment of the U.S. Constitution is the focus of court cases that have led to campuses being able to allow concealed carry (Duroni, 2019). One interpretation of the Second Amendment is that it is an individual's right to bear arms, not just a militia, meaning every person has the right to own a gun (Atlas, 2019). The ability for the individual to conceal their weapon was established legally through two landmark court cases, which were *District of Columbia* v. *Heller* (2008) and *McDonald* v. *City of Chicago* (2010; Arrigo & Acheson, 2016; Cole, 2016; Duroni, 2019; McQuiller, 2019; Vizzard, 2015; Wofford, 2017). The type of gun control laws passed is dependent on which political party is in office (Arrigo & Acheson, 2016; Fleming, McLean, & Tatalovich, 2018; Miller, 2019). The two political parties, Democrats and Republicans, have opposing stances on gun legislation. National

organizations that are proponents and opponents of gun rights have great influence on which legislation is passed (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Price et al., 2014; Richards, 2017). The second component of the protection motivation theory is the coping-appraisal process (Rogers, 1975). The coping-appraisal process is broken into three parts as well: response efficacy, self-efficacy, and the response cost. Response efficacy is the effectiveness of an individual's response in decreasing harm (Rogers, 1975). One possible resolution to increase an individual's response in decreasing harm is the legal option to allow CCOC. When dialogue on gun control occurs, three main topics are a part of the conversation: Second Amendment, major laws by political parties, and national organization's influence in politics.

Second Amendment. The Second Amendment is important when discussing concealed carry, because this amendment depending on interpretation states that it is an individual's right to own a weapon. If it is an individual's right, then it is more difficult for a law to be passed denying this right. The Second Amendment states, "A well-regulated Militia, being necessary to the security of a free State, the right of the people to keep and bear arms, shall not be infringed" (U.S. Const. amend. II). One of the main issues courts have had to address related to the Second Amendment is whether the Second Amendment applies to individuals or the militia (Atlas, 2019). There are two landmark cases that have ruled the Second Amendment applies to individuals, which makes it a basic right for individuals (Arrigo & Acheson, 2016; Duroni, 2019; Vizzard, 2015). These cases provided the legal support for CCOC as a legal option for public academic institutions. The Second Amendment issue regarding pertinence to the militia

or individuals provides legal support for CCOC if the interpretation is seen for individuals and not solely the militia.

The courts have had to decide if the Second Amendment applies to individuals or the militia. The various interpretations are specifically related with these phrases: "well-regulated Militia" and "right of the people." The term *militia* does not seem to apply to individuals. However, Supreme Court rulings have confirmed that militia in the Second Amendment applies to individuals (Atlas, 2019). A militia is comprised of individuals who confederate together and are not military personnel (Atlas, 2019). With this interpretation of the Amendment, any individual may legally own a gun.

Two landmark Supreme Court cases that directly involved the Second Amendment established ownership of a firearm as a right, not a privilege (Arrigo & Acheson, 2016; Vizzard, 2015). The first landmark case was *District of Columbia* v. *Heller* (2008), which challenged the provisions of the District of Columbia Code that required individuals to apply for an annual license to keep a weapon in a nonfunctional state in their house as violating the Second Amendment (Vizzard, 2015). Dick Anthony Heller was a police officer who wanted to register for a handgun to use as self-defense in his house (*District of Columbia* v. *Heller*, 2008). Mr. Heller applied for a one-year license to have a gun in his home, but his request was denied. Heller sued the District of Columbia arguing the Firearms Control Regulations Act of 1975 violated his right to bear arms as provided by the Second Amendment. The Second Amendment right to bear arms is tied to the natural right to self-defense. The *District of Columbia* v. *Heller* (2008) court case struck down the District of Columbia handgun ban in terms of the Firearms Control Regulations Act of 1975, which prohibited the possession of handguns in a

citizen's home, unless they were registered before 1976 (Arrigo & Acheson, 2016; Cole, 2016; Duroni, 2019; McQuiller, 2019; Vizzard, 2015; Wofford, 2017). The Supreme Court interpreted the Second Amendment as giving individuals the right to possess a firearm in the home for lawful purposes, such as self-defense (Arrigo & Acheson, 2016; Cole, 2016; McQuiller, 2019; Wofford, 2017). This court case was a landmark case because it established the Second Amendment as an individual's right to bear arms to protect themselves.

Two years later, the Supreme Court announced its ruling on the *McDonald* v. *City of Chicago* case (*McDonald* v. *City of Chicago*, 2010). In the previous *District of Columbia* v. *Heller* (2008) case, the ruling established the right to bear arms as protected by the Second Amendment; however, this case addressed the right regarding the States. The Supreme Court decision cleared up the uncertainty of *District of Columbia* v. *Heller* (2008) by adding that the right to keep and bear arms is incorporated by either the Due Process Clause or Privileges or Immunities Clause, which are part of the 14th Amendment, making them enforceable against the States (Arrigo & Acheson, 2016; Duroni, 2019; Vizzard, 2015). The decisions of the Court extended the potential restraint on legislation to the States by finding that it was a fundamental right and thereby incorporated the Second Amendment under the due process clause of the 14th Amendment (Arrigo & Acheson, 2016; Vizzard, 2015). Both court cases gave evidence that no form of government could legally have laws prohibiting personal ownership of guns, which collectively have enabled concealed carry (Somers, Fry, Jones, & Newton, 2020).

In addition to the previously identified cases, the Supreme Court extended gun rights for individuals from the individual's home to public spaces. In the 2010 court case of *University of Colorado* v. *Students for CCOC,* (2010) the appellate court held that the University's policy violated state legislation concerning the concealed carrying of weapons in public places (Arrigo & Acheson, 2016). The University did not have the authority to restrict firearm possession when the state law allowed it (Arrigo & Acheson, 2016). The Colorado Supreme Court case of *Regents* v. *SCCC (2012)* went before the court in March 2012 because Colorado's concealed carry law omitted "campuses" on its list of exempt places (Wofford, 2017). The court had to allow concealed carry firearms on public campuses throughout the state due to campuses being omitted from the list (Wofford, 2017). In each court case, the courts continued to broaden the scope of rights, allowing CCOC.

The Second Amendment being seen as a right for all people to bear arms and not solely for a regulated militia has allowed academic institutions to consider allowing CCOC. The courts have ruled in two landmark cases that state and local governments are violating citizens' constitutional rights when prohibiting personal ownership of guns (Somers et al., 2020). The rulings in these cases have created a dilemma for academic leaders who would like to prohibit CCOC. The courts sided with students that CCOC falls within their protected rights under the Constitution; therefore, campus leaders cannot prevent concealed carry. The precise wording of laws has granted campuses concealed carry policies that the academic institution had no legal power to deny. Self-efficacy, as previously identified in the protection motivation theory, is an individual's belief that their behavior could reduce a threat of harm (Rogers, 1975). A campus may allow

concealed carry, but it is the employees' decision to carry and use the weapon in response to a threat that is the self-efficacy part of the protection motivation theory. An employee who carries a concealed gun on campus believes with the use of their weapon they can reduce the threat of harm occurring to them (Hsiao, 2018; Shepperd et al., 2018). The two landmark cases have allowed academic intuitions to utilize concealed carry as part of their safety plan.

Political party in office. The Democrat and Republican political parties have opposing viewpoints on gun legislation. Current and future gun legislation will depend on the political party in office at the time of the legislation (Fleming et al., 2018; Joslyn, Haider-Markel, Baggs, & Bilbo, 2017). The Democratic Party is gun control and the Republican Party is gun rights (Joslyn et al., 2017; Reich & Barth, 2017). There are three very important Acts that have affected gun legislation: The National Firearms Act, the Gun Free Zone Act (GFZA), and the Brady Act (Fleming et al., 2018). Gun legislation has also categorized the types of concealed carry licenses based on types of issue. Once states went from "may issue" to "shall issue," this decision was a major contributor to the ability for campuses to legally allow CCOC (Gius, 2019; Vizzard, 2015; Wolfson, Teret, Azrael, & Miller, 2017).

During most elections each political party addresses the topic of gun ownership. The Republican presidential candidate for 2020, Donald Trump, stated during an interview with a Catholic TV station that he had and would continue to support the Second Amendment (Pearce, 2020). According to research, the Republican Party is typically more conservative and supportive of gun rights (Arrigo & Acheson, 2016; Fleming et al., 2018; Miller, 2019). The Republican Party advocates for minimizing gun

control policies due to the belief it is the individual's right to self-protection. Contrarily, the Democratic Party generally supports strengthening gun regulations and enforcing existing restrictions or bans (Arrigo & Acheson, 2016; Fleming et al., 2018; Miller, 2019). The Democratic presidential candidate for 2020, Joe Biden, posted on Twitter that he would end the gun violence pandemic with stricter gun legislation (Pearce, 2020). Democrats believe that more weapons create more violence and if there are more regulations, then it will decrease the odds of a shooter obtaining a gun (Fleming et al., 2018). Gun control is one of the most controversial public policy issues in the U.S. (Miller, 2019). The political parties have opposing viewpoints, policies, and perspectives of gun control, which they address in their political campaigns.

According to research, when the Democratic Party controls Congress, gun legislation is gun control and when the Republic Party controls Congress gun legislation is gun rights (Joslyn et al., 2017). The National Firearms Act of 1934 and the Federal Firearms Act of 1938, gun control laws, were signed by Democratic President Roosevelt while the Democratic Party was more prevalent in Congress (Fleming et al., 2018; Vizzard, 2015). The National Firearms Act taxes manufacturers, importers, and dealers of firearms and restricts the importation and transportation of certain firearms. Thirty years later, Democratic President Lyndon Johnson signed into law Title IV of the Omnibus Crime Control and Safe Streets Act of 1968 and the Gun Control Act of 1968 (Cole, 2016; Fleming et al., 2018; Vizzard, 2015). The Gun Control Act of 1968 was put in place after the assassinations of Robert Kennedy and Martin Luther King (Fleming et al., 2018). The Act prohibited interstate firearm transfers except among licensed manufactures, dealers, and importers. In 1986, Congress passed the Firearm Owners

Protection Act, which prohibits felons from owning or possessing guns or ammunition (Cole, 2016; Vizzard, 2015). Incidentally, this Act was supported by both the Republican and Democratic parties (Oliphant, 2017). Both political parties supported this law because both believe in responsible gun legislation and being a felon means that an individual has harmed someone (Oliphant, 2017). In that same year, the Law Enforcement Officers Protection Act outlawed ammunition that can penetrate a bulletproof vest (Cole, 2016). The Brady Handgun Violence Prevention Act (1993) was enacted with a majority held by the Democratic Party in Congress and signed by President Clinton, who also signed the Title XI law, commonly known as the Assault-Weapons Ban (Cole, 2016). Due to the sunset provision, the Title XI law expired 10 years later in 2004 and was not renewed (Cole, 2016; Fleming et al., 2018; Vizzard, 2015). No gun control legislation has passed either house of Congress since the sunsetting of the assault weapons ban (Vizzard, 2015). However, state legislatures have been primarily liberalizing concealed carry laws (Bishop, 2019; Vizzard, 2015). There is a connection between the political party in office and whether laws being enacted are gun control or gun rights (Bishop, 2019).

The GFZA was passed in 1990 after a publicized incident involving a school shooting. In 1988, a 19-year-old schizophrenic used his grandmother's pistol to shoot 11 adults and children at an elementary school in Greenwood, North Carolina, killing two 8-year-old girls (Nedzel, 2014). In response, in 1990, Congress passed the GFZA, which made it illegal for any individual to carry a gun onto school grounds (Minshew, 2018; Nedzel, 2014). Republican President George Bush signed the GFZA, which was subsequently signed the GFSZA, was signed by Democratic President Clinton in 1994

(McQuiller, 2019; Minshew, 2018; Nedzel, 2014). The GFZA was amended in 1995 to allow an individual to carry a firearm in a school zone if the individual possessing it has a concealed carry permit or license, however, the individual cannot fire it in a school zone (McQuiller, 2019; Minshew, 2018). The GFZA is more consistent and prohibits both carrying and firing on all school properties (Nedzel, 2014). As a result of these laws, schools have a "Gun Free Zone" sticker posted at the entrance of their building as a reminder of the GFSZA. Conservatives believe this sign does not stop individuals from bringing a weapon into a school and attracts shooters because it establishes that no one else will be armed (McQuiller, 2019; Nedzel, 2014).

The most notable firearms act is the Brady Act, which was enacted in 1993. The Brady Act was created in response to the attempted assassination of President Ronald Reagan and named after his press secretary, James Brady, who suffered a severe brain wound during the attempt (Cole, 2016). The Brady Handgun Violence Prevention Act (1993) prohibited anyone fitting the following four categories from purchasing a weapon: (a) under indictment for or convicted of any crime punishable by a year imprisonment, (b) an unlawful user of or addicted to any controlled substance, (c) illegally or unlawfully in the country, or (d) committed to a mental institution by a court or other administrative or lawful authority and those adjudicated as mentally defective. The National Instant Criminal Background Check System was added to the Brady Act 5 years later, which required a background check when purchasing a firearm (Cole, 2016; Vizzard, 2015). There are two parts to the appraisal theory, which are primary appraisal and secondary appraisal (Lazarus, 1966). During the secondary appraisal process, an individual evaluates the resources available to handle the situation and whether they can cope

effectively with the situation (Jiang, 2017; Lazarus, 1966). With laws being passed making it legal for an individual to apply for a concealed carry license, an individual applying the secondary appraisal process could recognize the provisions that allow concealed carry as a coping mechanism for self-protection (Jiang, 2017; Lazarus, 1966).

In contrast to federal legislation, state legislatures have been primarily liberalizing concealed carry laws (Bishop, 2019; Malone & Steidley, 2019; Vizzard, 2015). State laws have shifted from may issue to shall issue verbiage (Gius, 2019; Vizzard, 2015; Wolfson et al., 2017). May issue allowed the authorities the discretion to decide if an individual could be issued a concealed carry permit (Gius, 2019; Malone & Steidley, 2019). In 1986, 25 states had may issue laws; however, by 2015 only nine states still had may issue laws (Rowhani-Rahbar, Azrael, Lyons, Simonetti, & Miller, 2017). State laws have also shifted where the permit allows open carry, from your home to public places that allow open carry (Vizzard, 2015). Texas House Bill 195, open carry, and Senate Bill 11, campus carry, signed on June 13, 2015, were ordered into law by Governor Greg Abbott (Wofford, 2017; Wolfson et al., 2017; Reed, 2016). The bill was deliberately signed exactly 50 years after the notorious Tower shooting (Ponder, 2018; Somers et al., 2020; Somers & Phelps, 2018). Signing the bill on the anniversary date was to signify why the school decided to allow concealed carry in hopes of deterring another mass school shooting. These bills allow individuals with a permit to open carry in public areas and on institution campuses (Reed, 2016; Wofford, 2017; Wolfson et al., 2017). Once the bill was signed, additional campuses decided to incorporate concealed carry as part of their safety measures (Wofford, 2017). Once the law allowed for open carry in public places the way was paved for allowing CCOC (Vizzard, 2015). State legislatures have

been liberalizing concealed carry laws, such as laws that shifted from may issue to shall issue permits and allowing CCOC.

The ability to legally carry a concealed gun on campus was established starting with the courts viewing the Second Amendment as a right for an individual to own a gun for personal use. Once states went from may issue to shall issue, this decision was a major contributor for campuses to legally allow CCOC (Gius, 2019; Vizzard, 2015; Wolfson et al., 2017). Thus, both federal and state courts have held that individuals may own and a carry a gun, including carrying a gun on campus. Allowing individuals to legally be able to carry concealed guns addresses the secondary appraisal process of the cognitive appraisal theory (Lazarus, 1966). Individuals now had the resource of a concealed carry weapon available to utilize in a mass shooting situation (Jiang, 2017; Lazarus, 1966).

National organization's influence. Gun-rights and gun-control advocates have the same desire, which is to protect people from gun violence (Ponder, 2018). The difference between the two lobbying groups lies in how to protect people from gun violence (Ponder, 2018). The strength of gun rights national organizations, gun control national organizations, and national organizations in politics is an important element to be considered in gun legislation. The two main national gun rights lobbying groups are the NRA and SCCC (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Wofford, 2017). The two main gun control lobbying groups are the Brady Campaign and Students for Gun Free Schools (SGFS; Arrigo & Acheson, 2016; Kamal & Burton, 2018; Wofford, 2017). Gun control policy is influenced by lobbying groups (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Price et al., 2014; Richards, 2017).

Gun rights organizations. The largest gun rights organization is the NRA (Arrigo & Acheson, 2016; Wofford, 2017). The Institute for Legislative Action is the lobbying arm of the NRA, which advocates for gun rights protected as defined by the Second Amendment of the United States of America (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Price et al., 2014; Richards, 2017). Gun rights include the right to purchase, possess, and use firearms for lawful purposes (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Price et al., 2014; Richards, 2017). Gun rights advocates believe that people make the conscious decision to kill, not the gun itself (Kamal & Burton, 2018). This message is expressed in the NRA slogan: "The only way to stop a bad guy with a **gun** is a good guy with a **gun**" (McQuiller, 2019, p. 6). Individuals who are part of the NRA believe that people have the right to own weapons and may identify as Republican (Churchill, 2019). The organization states that every individual has the right to protect themselves and their family (Steidley & Colen, 2017). The promotion of protecting your family is a strong motivator for people to own a gun and the NRA promotes this need to protect your family as part of their recruitment (Steidley & Colen, 2017). The NRA believes in and supports people advocating for their right to bear arms.

The number of supporters and financial power the NRA has impacted gun rights' legislative successes (Lacombe, 2019; Reich & Barth, 2017). Polls show increased and widespread support for stricter gun control; however, policy reflects gun rights, not gun control (Richards, 2017). The NRA gave thousands of dollars to Colorado state legislators to defeat gun control laws that were being created due to Columbine (Kamal & Burton, 2018). The NRA creates a social identity for the over 1,000,000 members of the organization (Lacombe, 2019). The NRA explains how its social identity is under attack

and that the members should stand up for their rights (Lacombe, 2019). The NRA benefits from long-term investments with legislators who assure support on key votes (Reich & Barth, 2017). The mobilization of the members of the NRA and targeted financial spending combined explains why the NRA can influence legislative decisions about gun control (Lacombe, 2019; Reich & Barth, 2017). The NRA is a powerful, national gun rights organization that spends significant dollars lobbying for legislation in support of gun rights.

The second notable gun rights organization is the SCCC. The SCCC was created after the Virginia Tech shooting by Chris Brown, a student who attended the University of North Texas, to give people the ability to fight back (Arrigo & Acheson, 2016; Wofford, 2017). This organization was created to give students a voice for their concern for safety while on campus (Arrigo & Acheson, 2016; Wofford, 2017). The organization holds an annual "Empty Holster Protest," where students wear empty holsters to symbolize being left defenseless (Wofford, 2017). More than 130 colleges participate in the event (Wofford, 2017). The argument for the SCCC is that a campus that allows concealed carry would deter a shooter (Soboroff et al., 2019). The shooter would not know who might be carrying a gun, which would deter potential threats (Nedzel, 2014; Soboroff et al., 2019). It is not necessary for an individual to actually carry a gun to deter the intruder; it is the idea that the intruder would have no idea who is carrying (Soboroff et al., 2019). In the Supreme Court case *Regents* v. *SCCC*, the SCCC won and the State of Colorado had to allow concealed carry on all public campuses (Wofford, 2017). The SCCC was able to win the case because the concealed carry law omitted "campuses" as an exempted place (Wofford, 2017). The SCCC has influence and affects policy-makers'

decisions on gun rights (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Richards, 2017). The SCCC is a gun rights organization established to advocate students' right to carry a gun on campus.

Gun control organizations. There are two main organizations for gun control, the Brady Campaign and Students for Gun Free Schools (SGFS; Arrigo & Acheson, 2016; Wofford, 2017). The Brady Campaign is a lobbying group whose goal is to pass, enforce, and protect sensible laws and public policy that address gun violence at the federal and state level (Arrigo & Acheson, 2016; Kamal & Burton, 2018). The Brady Campaign was established in 1974 as the National Council to Control Handguns, changed its name to the Brady Campaign to Prevent Gun Violence in 2000, and subsequently shortened its name to Brady Campaign (Brady, 2019). The Brady Campaign believes that without gun control there will be more guns, leading to more gun violence. After a shooting, the Brady Campaign promotes the idea that stricter gun legislation would prevent individuals from gaining access to a weapon and killing innocent people (Steidley & Colen, 2017). Gun control organizations believe in limiting access to weapons in order to decrease gun violence.

The SGFS is another gun control organization that opposes forcing states to allow CCOC (Arrigo & Acheson, 2016; Kamal & Burton, 2018). The SGFS has a 5-point argument why concealed carry should be prohibited on campuses (Wood, 2014). These are the five points:

- Concealed handguns would detract from a healthy learning environment.
- More guns on campus would create additional risk for students.
- Shooters will not be deterred by concealed carry permit holders.

- Concealed carry permit holders are not always "law abiding" citizens.
- Concealed carry permit holders are not required to have any law enforcement training (Wood, 2014, p. 428).

In response to the Parkland tragedy, where 17 high school students were shot, the SGFS helped organize the March for Our Lives on March 14, 2018, and the National School Walkout on April 20, 2018. Both demonstrations occurred to advocate for more sensible firearm safety legislation (Greenberg, 2019; Minshew, 2018; Phillips, 2018). Another demonstration involved teachers who opposed being armed by starting the social media campaign #ARMMEWITH, where teachers tweeted their preferences of "arms" with items such as necessary supplies to teach their students rather than a gun (Minshew, 2018). The SCCC has influence and affects policy-makers' decisions on gun control legislation (Phillips, 2018). The SCCC is a gun control organization that advocates sensible gun control legislation and organizes students to march in support of gun control legislation.

Both the NRA and Brady Campaign expend significant financial resources to influence legislation in favor of their position on gun rights/control through lobbying efforts and persuading the media (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Richards, 2017). The NRA has more power than the Brady Campaign because of the NRA's financial strength and access to politicians (Kamal & Burton, 2018; Richards, 2017). Influencing the media after a violent incident concerning gun ownership is another way lobbying groups pressure for policy change (Arrigo & Acheson, 2016). To the lobbying group, spending money to influence the media's message greatly increases its chance of passing a favored law or preventing the passage of a disliked law. Media

can portray a school shooting as a platform for either gun control or gun rights based on how they present the story (Arrigo & Acheson, 2016). New policy typically is formed after a highly publicized violent incident occurs (Arrigo & Acheson, 2016; Kamal & Burton, 2018). After a highly publicized event people demand repercussions and seek to make individuals feel safe, thus new policies are put into place. How the media depicts the event, either in a gun rights or gun control light, greatly affects what policies will be put into place (Steidley & Colen, 2017). Both gun rights and gun control organizations seek to influence legislation after a highly publicized shooting event. The organizations seek to influence the narrative toward their position regarding gun legislation.

In summary, gun rights and gun control advocates believe that their view of how to decrease gun violence is correct (Ponder, 2018). The gun rights organization, the NRA, and the gun control organization, the Brady Campaign, are the two main national lobbying groups (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Wofford, 2017). Students for CCOC and SGFS are two campus organizations formed to influence student advocacy (Arrigo & Acheson, 2016; Wofford, 2017). The cognitive appraisal theory states that for an individual to feel stress they must perceive they are in danger and an individual's perception of safety is affected by the concealed carry policy on a campus (Jiang, 2017; Lazarus, 1966). The protection motivation theory identifies four factors associated with the concept of fear appeals, which examines an individual's perceived severity of threat, their vulnerability, tools they have to handle the situation, and perceived self-efficacy (Rogers, 1975). The option for employees to carry a concealed gun on campus would be part of the tools portion of the protection motivation theory to handle a situation. Each of these organizations seeks to influence gun control policy

through lobbying efforts, financial resources, and shaping the narrative about gun-related events (Kamal & Burton, 2018; Richards, 2017).

Summary of gun control laws. The political party in office reflects the gun legislation being passed. The National Firearms Act, GFZA, and the Brady Act collectively have affected gun legislation. Once states went from may issue to shall issue, this decision was a major contribution to the ability for campuses to legally CCOC (Gius, 2019; Vizzard, 2015; Wolfson et al., 2017). Gun legislation will continue to be affected by lobbying groups. Both gun control and gun rights advocates want to protect people; however, they vary in their views of how best to protect people from gun violence (Ponder, 2018).

The ability for campuses to allow concealed carry has been decades in the process starting with the two landmark Supreme Court cases that used the Second Amendment to established gun ownership as a right (Arrigo & Acheson, 2016; Atlas, 2019). After those court decisions concealed carry permits went from may issue to shall issue, which liberalized concealed carry laws (Gius, 2019; Wolfson et al., 2017). Because of these court rulings, legislating stricter gun control laws face significant legal hurdles. Even if the public desired stricter gun laws, legislation of stricter laws may not be possible. Lobbying groups highly influence legislation with their connections to politicians and financial strength (Kamal & Burton, 2018; Richards, 2017). State legislatures have been primarily liberalizing concealed carry laws, which has propelled more campuses each year to permit CCOC (Bishop, 2019; Malone & Steidley, 2019; Vizzard, 2015). A campus may allow concealed carry, but it is the employees' decision to carry and use a weapon in response to a threat. The employees' decisions are based on self-efficacy as

identified in the protection motivation theory. An employee who concealed carries on campus believes with the use of their weapon they can reduce the threat of harm occurring to them (Hsiao, 2018; Shepperd et al., 2018). The protection motivation theory depicts individuals feeling motivated to protect themselves over feeling the emotion of fear.

CCOC

After a mass shooting people are scared and look to the government for a resolution. For some colleges and universities, one solution was allowing CCOC. There are five major elements to consider when allowing CCOC: (a) perceptions of safety after a school shooting, (b) arguments for CCOC, (c) arguments against CCOC, (d) employees' perceptions of safety, and (e) campus policies. Perceptions of safety after a school shooting are altered and colleges and universities need to address security measures to regain the perception of safety on campus. There are two aspects to consider regarding CCOC: proponents believe that each person should have the right to defend themselves and opponents believe that allowing CCOC alters the learning environment (Hsiao, 2018; Minshew, 2018; Wofford, 2017). Employees at academic institutions were affected by the decision to allow CCOC (Reed, 2016; Somers & Phelps, 2018). There are different campus policies regarding CCOC, specifically in Utah and Tennessee (Bishop, 2019; Schildkraut, Carr, & Terranova, 2018). Utah allows anyone to conceal carry on public campuses (Schildkraut, Carr, & Terranova, 2018). Tennessee allows only employees to concealed carry on public campuses (Bishop, 2019). The perception of safety is the threat-appraisal process of the protection motivation theory (Rogers, 1975). The decision to allow concealed carry on the campus is the coping-appraisal process of

the possibility of a school shooter. Thus, an individual may cognitively feel safer carrying a concealed gun. The individual has calculated when a threat is high enough to use the concealed gun as their coping process to decrease the odds of harm happening to them (Rogers, 1975). CCOC affects more than just the individual who is carrying. For some it creates a sense of security and for others, a sense of panic or fear of being shot (Minshew, 2018; Schildkraut, Carr, & Terranova, 2018; Wofford, 2017).

Perceptions of safety after school shooting. After a campus shooting the perceptions of safety are altered (Minshew, 2018). Perceptions of safety can be directly influenced by past victimization and communication between the academic institution and student about events occurring on campus (Hignite, Marshall, & Naumann, 2018). Even if the mass shooting did not occur on an individual's own campus, the fear of a mass shooting occurring again increases with each subsequent mass shooting (Turchan, Zeoli, & Kwitakowski, 2017). When an individual feels fear, their perception of safety decreases. Fear is an emotion and academic institutions must address the emotional side of an incident to improve the perception of safety (Merianos et al., 2017). To improve the perception of safety, campuses are improving their transparency of safety on campus. There are certain indicators that confirm an individual's favorable attitude toward CCOC (Hassett et al., 2020). Perceptions of safety are affected by several factors including past victimization, transparency, and communication between academic institutions and the public.

Perception of safety is affected by an individual's fear of being a victim. Past victimization experiences impact the perception of the likelihood of being a victim again (Hignite et al., 2018). An individual that does not want to become a repeat victim will

become educated regarding the campus's safety procedures. Some individuals associate safety with carrying a weapon to defend themselves and therefore might possibly be more likely to attend a campus that allows CCOC as part of that campus's safety procedures. When an individual is informed of safety procedures, they feel more prepared to handle a situation, which could improve their perception of safety. Some campuses have campus police included in their safety procedures. To increase the perception of safety on campus, academic institutions have increased visibility of campus police, however students question their status as "real" police officers (Hignite et al., 2018). Some students feel more threatened with increased numbers of campus police. Students have a heightened sense of danger when they see the presence of more officers (King & Bracy, 2019). Perception of safety is affected by past victimization and safety procedures academic institutions choose to utilize (Hignite et al., 2018).

Students want to be informed about past victimization on campus and how the campus will handle the next emergency event. Transparency and communication of events from their academic institutions about their safety is important to improve the perception of safety. Transparency allows students to make educated decisions regarding which academic institution to attend. In response to students' desire for information about prior victimization, violence, and security issues, the Clery Act was passed (Hignite et al., 2018). The Clery Act has made campus crime public, which empowers individuals with knowledge and reduces their perceived risk of becoming a victim (Hignite et al., 2018; Merianos et al., 2017).

Clear and effective communication with students during an emergency clarifies their options and perhaps increases their perceptions of safety. Technology is increasing

the communication of emergency information on a campus where it is harder to communicate with everyone simultaneously, improving the perception of safety on campus (Bishop, 2019). Colleges have set up text messages to alert staff and students of incidents, blue-light emergency buttons throughout the campus, and email alerts that can be sent to a mass of people, alerting them to danger. Unlike in K-12 schools where there are intercom systems, campuses were too large and had to devise a better way to communicate. Communicating information quickly and effectively is necessary for an individual to make the best decision for personal safety. Having instantaneous information allows students more options to protect themselves from harm (Bishop, 2019; Merianos et al., 2017).

Some students acknowledge an increased perception of safety when CCOC is allowed as part of the safety procedure at academic institutions. Research shows that demographic variables, gun ownership, and even fear of campus crime may explain the variance in attitudes of favorability toward CCOC (Hassett et al., 2020). Of 12 studies, respondents who were in favor of CCOC reported themselves as a Republican or conservative and were male (De Angelis, Benz, & Gillham, 2017; Hassett et al., 2020; Malone & Steidley, 2019; Schafer et al., 2018; Schildkraut, Carr, & Terranova, 2018; Thompson, Price, Dake, & Teeple, 2013; Thompson, Price, Dake, Teeple, Bassler, et al., 2013; Verrecchia & Hendrix, 2018). People who live in southern regions of the United States are more favorable toward CCOC than people who live in northern regions (Rowhani-Rahbar et al., 2017; Schildkraut, Carr, & Terranova, 2018). This evidence is not surprising as people in the south are more likely to own a gun and teach their kids how to use it (Rowhani-Rhaber et al., 2017). Studies also supported that concealed carry

permits are sold more in rural areas that have a culture of hunting (Schildkraut, Carr, & Terranova, 2018; Turchan et al., 2017; Woldoff, Litchfield, & Sycafoose Matthews, 2017). McLean and Sorens (2019) stated that rural areas lean towards the Republican Party and conversely urban areas lean more toward the Democratic Party. Woldoff et al. (2017) stated that gun ownership is part of rural identity and "proper" rural upbringing includes teaching child gun safety and responsible gun ownership. Rowhani-Rahbar et al. (2017) identified the idea that prior victimization was a key indicator of an individual's favorability toward CCOC. Demographic variables, gun ownership, and prior victimization may explain a good degree of variance in attitudes toward CCOC.

The perception of safety after a mass shooting is affected, which influences academic institutions to reevaluate their safety procedures. According to Hassett et al. (2020), there is support for favorability toward CCOC based on demographics, past victimization, and gun ownership. The cognitive appraisal theory explains how prior experiences affects the individual's perception of safety on a campus that allows concealed carry (Lazarus, 1966). Lazarus (1966) argued that how we perceive events in life has direct psychological effects and mental events have biological outcomes. The protection motivation theory depicts individuals feeling motivated to protect themselves rather than feeling the emotion of fear (Rogers, 1975).

Arguments pro CCOC. There are two main arguments made by individuals who are pro CCOC. The first argument is that a campus that allows CCOC allows everyone to protect themselves (Steidley & Colen, 2017). With everyone having the ability to protect themselves, it also increases the number of people on campus that could protect others during an emergency (Merianos et al., 2017). The second argument is that

there has not been a mass shooting anywhere people are armed, for instance a police station (Hsiao, 2018; Somers & Phelps, 2018). Therefore, a logical resolution would be to arm campuses to decrease the vulnerability on campus (Hsiao, 2018; Somers & Phelps, 2018). Individuals who are pro CCOC have the mentality that the ability to protect themselves is a right that others cannot take away from them (McQuiller, 2019).

Americans who own guns view gun restrictions as a threat to their safety and feel safer if they are armed (Shepperd et al., 2018). One argument for CCOC would allow qualified students, staff, and faculty to carry, increasing the number of individuals to protect the campus (Hsiao, 2018). Police do not come until after a crime has occurred. On a campus the local police are called after an incident is reported and the campus police are only able to protect a small portion of campus considering the large areas involved (Hsiao, 2018). Individuals that are carrying a concealed gun on campuses have the ability to protect themselves and do not have to rely on police officers to arrive.

There has never been a mass shooting where there is a mass of armed individuals, because the shooter could be killed instantly. Colleges' idea of a gun-free zone was to put signs and stickers on doors that said no guns allowed (McQuiller, 2019). The stickers in the doorways told mass murders that no one had a gun legally besides an officer and officers could easily be identified (McQuiller, 2019). Mass shootings have increased at schools where individuals are not armed. Proponents of CCOC believe that places that have armed individuals such as banks, police stations, and courthouses have fewer mass shootings (Hsiao, 2018; Somers & Phelps, 2018). An intruder might be deterred from committing a crime knowing there are other armed individuals on site; therefore, intruders might be deterred on a campus that allows concealed carry (Hsiao, 2018;

Somers & Phelps, 2018). David Burnett, SCCC Spokesman, understood the legitimate reasons for gun-free areas at airports, courthouses, banks, and prisons because these areas are enforced with secure parameters (Hsiao, 2018; Somers & Phelps, 2018). These areas have armed guards and metal detectors because these environments put people in a position of increased vulnerability (Hsiao, 2018). If places that do not allow concealed carry do not have safety parameters, then they have violated a person's right to self-defense (Hsiao, 2018). According to Hsiao (2018), concealed carry permit holders tend to be more law abiding than non-permit holders. Everyone should have the ability to protect themselves legally including on campus (McQuiller, 2019). In effect, concealed carriers believe that schools allowing CCOC enables the ability to protect oneself. An employee who carries a concealed gun on campus believes with the use of their weapon they can reduce the threat of harm occurring to them (Hsiao, 2018; Shepperd et al., 2018). The ability to protect oneself with a firearm satisfies the protection motivation theory's concept that individuals feeling motivated to protect themselves overcome the emotion of fear.

Arguments against CCOC. There are two main arguments that individuals make against CCOC. First, as Malone and Steidley (2019) stated, "The act of carrying a concealed firearm for self-defense is, in essence, carrying the potential to commit violence" (p. 439). Americans who do not own weapons believe people who carry guns create danger (Shepperd et al., 2018). Second, allowing CCOC influences the climate of learning. Employees are nervous about altercations since individuals may have a deadly weapon concealed on their body (Reed, 2016). For some individuals CCOC makes them feel safer and others fear being a victim every time they walk on campus (DeMitchell &

Rath, 2019). Opponents of CCOC argue that allowing a person to carry on campus provides the opportunity for that person to commit a crime with the weapon and CCOC creates a climate of uncertainty for a person who does not carry a weapon.

According to the argument of individuals against CCOC, violence and danger would increase on campuses (Minshew, 2018). They believe more guns in a community might lead to reduced feelings of safety and gun restrictions are necessary for safety (Shepperd et al., 2018). More guns on campus means there will be more gun-related accidents, including the possible increase in homicides and suicides on campus, and an armed student could be misidentified as a shooter (Minshew, 2018; Schildkraut, Carr, & Terranova, 2018; Wofford, 2017). Somers et al. (2020) discovered that 94% of study participants did not support allowing guns on college campuses. Even highly trained individuals have accidents. Thus, allowing individuals to carry concealed guns puts students in more danger than they were prior to allowing CCOC (Minshew, 2018; Schildkraut, Carr, & Terranova, 2018). The Muhlenberg experiment discovered that at around 150 to 175 heartbeats per minute an individual will start to lose their peripheral vision, then the individual will lose their auditory acuity, and then the body goes into survival mode (Wofford, 2017). This experiment supports the idea that an individual would have a greater chance of hitting another evacuee than hitting the shooter (Wofford, 2017). Opponents to CCOC argue that allowing guns on campus increases the potential of violence, homicides, accidents, and suicides, which makes CCOC unacceptable.

Another argument against CCOC is that universities should cultivate a learning environment absent suspicion, fear, and danger (Arrigo & Acheson, 2016). College students misuse alcohol and have raging hormones, which may lead to an increase in

assaults between student and student and student and teacher that may result in a homicide (Thompson, Price, Dake, & Teeple, 2013; Thompson, Price, Dake, Teeple, Bassler, et al., 2013). More guns on campus could escalate violence rather than diminish violence (Arrigo & Acheson, 2016; Duroni, 2019). According to "weapons effect," individuals in the presence of a weapon increase their feelings of aggression (Minshew, 2018). In effect, even if nobody in the class is carrying a gun, the possibility of it creates a tense environment. Arguments against CCOC include the perception of increase in violence and danger on campus while altering the learning environment in a negative way.

The perception of safety is more than the environment the individual is in. According to the cognitive appraisal theory and protection motivation theory, it is a combination of their prior experiences and the resources they have to protect themselves in their current environment (Lazarus, 1966; Rogers, 1975). The main argument for CCOC is one's ability to protect oneself. Individuals against CCOC believe anyone who has a concealed gun causes more danger, as they may accidently shoot the wrong person, injure themselves, and/or be misidentified as the shooter (Minshew, 2018; Schildkraut, Carr, & Terranova, 2018). Additionally, having weapons on campus affects the academic environment, creating tension between students and staff (Arrigo & Acheson, 2016). The protection motivation theory describes the individual's vulnerability and how it affects their self-efficacy (Rogers, 1975). Vulnerability is the probability that harm will come to the individual from an incident or behavior. Self-efficacy is the individual's belief that they can reduce the threat of harm. The ability to conceal carry on a campus, for some

individuals, reduces that threat. There will always be two viewpoints regarding CCOC, however CCOC affects everyone's perception of safety.

College professorship after CCOC. Being a professor changed dramatically after the passage of Senate Bill 11, especially if that professor worked on a campus that allowed any individual with a permit to concealed carry (Reed, 2016). Professors felt their safety was in jeopardy and every confrontation could turn into an individual pulling a concealed gun on them (DeMitchell & Rath, 2019). Professors believed they must watch what they said as part of their instruction to decrease offending an armed individual. Professors' job positions were greatly affected by allowing CCOC, to the point that people quit their jobs (Soboroff et al., 2019). Employees working on a campus that allowed CCOC had mixed feelings depending on whether their perception of safety included concealed carry for themselves. The passage of Senate Bill 11 changed professors' perceptions of safety, making them more vulnerable to confrontation with a person carrying a weapon.

Professors working on campuses that allow any individual to concealed carry either feel safer or terrified of upsetting someone in fear of their shooting back in rage (Reed, 2016; Somers & Phelps, 2018). In February 2016, University of Houston faculty senate outlined modifications to teaching practices post Senate Bill 11 with the following instructions:

- Be careful discussing sensitive topics.
- Drop certain topics from your curriculum.
- Do not "go there" if you sense anger.
- Limit student access off hours.

- Go to appointment only office hours.
- Only meet "That student" in controlled circumstances (Reed, 2016, p. 131).

These modifications made being a professor more difficult and subconsciously caused professors to treat students with a bias out of fear of retaliation. Some campuses have moved their discipline hearings to police stations with metal detectors to protect themselves from an enraged student being reprimanded (Somers & Phelps, 2018). College professors believe they have a reason to fear CCOC. Professors are in charge of assigning students' grades, disciplining students, and challenging students' thoughts. Each of these circumstances could cause a student to lose their temper and if armed could have deadly consequences (Reed, 2016; Somers & Phelps, 2018). Overnight, professors that suddenly worked on a campus that allowed concealed carry felt safer or feared for their lives.

Academic institution job guidelines were greatly affected by allowing CCOC to the point that people quit their jobs. The year Senate Bill 11 passed, a dean and several faculty members at a university in Texas left the university, because they did not feel safe being on a campus that allowed CCOC (Soboroff et al., 2019). Professors from UT-Austin have shown concern for their safety and question how the University will accommodate for their disabilities (Somers & Phelps, 2018). In a one-on-one interview, a professor asked, "How do we duck and cover? How do you talk down somebody who does pull a weapon in your seminar?" (Somers & Phelps, 2018, p. 5) and a different professor expressed concern because they were hearing impaired and could not hear warning signals in an active shooter scenario. These questions could mean life and death for them if not addressed appropriately.

There is friction between open carry and the First Amendment (Duroni, 2019). Professors believe that part of their job is to challenge students, which is intended to result in growth, not actionable rage (Reed, 2016; Somers & Phelps, 2018). On a campus that allows concealed carry, controversial topics are being refrained from being discussed in class due to fear of an armed individual disagreeing (Somers & Phelps, 2018). Texas Attorney General Ken Paxton filed a motion saying that the only academic freedom for faculty members is the First Amendment and due to CCOC that has been limited for fear of offending an armed student (Somers & Phelps, 2018).

Professors felt their safety was in jeopardy and every confrontation could turn into an individual pulling a concealed gun on them (DeMitchell & Rath, 2019). Once concealed carry became legal on campuses the professor's job became altered (Soboroff et al., 2019). Professors refrained from teaching about controversial topics in fear of upsetting an armed student (Somers & Phelps, 2018). Lazarus stated in the cognitive appraisal theory that in order for an individual to feel stress they have a perception that there is an imbalance in the demand of a behavior and the ability for the individual to deal with the demand (Jiang, 2017; Lazarus, 1966). An individual's environment assists in developing their perception of safety. Employees may perceive their safety on a campus that allows concealed carry as an imbalance in the demand of a behavior and the ability to protect themselves, if they are unarmed and their students are able to carry a concealed gun (Lazarus, 1966).

Campus policies. Campuses wanted to increase the perception of safety and therefore some academic institutions allowed CCOC as a safety procedure. In 2003 the state of Colorado passed a law that allowed the carry of concealed handguns in public

places, excluding public schools. It was not until 2006 that individuals at academic institutions could carry concealed guns (Sandersen et al., 2018). Campus carry legislation is increasing each year (Hassett et al., 2020). Campus carry laws only pertain to public colleges and universities. Each academic institution can implement its own campus regulations based on their state's type of concealed carry. To improve their perception of safety, public campuses have implemented a concealed carry option either allowing it with guidelines or prohibiting it.

There is a legal difference in CCOC between private and public academic institutions. Private universities have always had the option of banning weapons on their campuses (Gius, 2019). Since public universities rely on state funding, they must follow state laws, including allowing CCOC. Private universities have more options and are not required to follow state laws. There are only state laws regulating concealed carry of firearms; there are no federal laws regulating the concealed carry of firearms (Gius, 2019). The concealed carry laws are unique to each state and may even be different within the state. Therefore, before deciding to work or attend a university, an individual should look at the safety protocol and policy of concealed carry.

There are different campus policies pertaining to individuals carrying concealed guns, including who and where. The law may prohibit all guns on campus or permit guns on campus (Somers et al., 2020). Certain states allow each academic institution to choose their own policy and make regulations such as only allow employees with a concealed carry permit to carry, or prohibit concealed carry in certain parts of the campus. Certain "sensitive" spots may also prohibit concealed carry even if the campus allows it, such as, a campus daycare, university high schools, or labs that have chemicals

and medical facilities (Somers et al., 2020). These are considered sensitive and always gun-free, because children are present, or the rooms include safety hazards. At the time of this study there were 16 states that completely banned weapons on all of their campuses and 23 states let the academic institutions decide their individual restrictions on campus concealed carry (National Conference of State Legislatures, 2019; Sandersen et al., 2018). Each state and academic institution within the state may have its own specific laws or policies regarding CCOC.

There are four types of state-level concealed carry weapons laws. The first is complete prohibition of all concealed handgun carrying (Duroni, 2019; Malone & Steidley, 2019). As of 2018, no state had completely prohibited concealed carry (Duroni, 2019; Malone & Steidley, 2019). This is because after the Heller Court Case it became very difficult to prohibit concealed carry. The second category of the law is the may issue, where local and state authorities can deny a request for a concealed carry permit (Duroni, 2019; Malone & Steidley, 2019; Rowhani-Rahbar et al., 2017). The third category of the law is the shall issue; if an applicant meets all the requirements then the state has to issue a concealed carry permit (Duroni, 2019; Malone & Steidley, 2019; Rowhani-Rahbar et al., 2017). The fourth category is the most unrestrictive; there is no permit required to carry a concealed handgun. There are currently seven states that do not require a permit to concealed carry: Maine, Arizona, Kansas, Wyoming, Alaska, Vermont, and now Missouri (Duroni, 2019; Malone & Steidley, 2019). A campus may allow concealed carry, but it is the employee's decision to carry and use the weapon in response to a threat, which is the self-efficacy part of the protection motivation theory.

With states allowing CCOC, this allows employees the option to carry a concealed gun to protect themselves.

State specific policies. Each academic institution has a concealed carry policy that either allows CCOC or bans it and additionally specifies who can CCOC. Ten states allow concealed carry: Arizona, Colorado, Georgia, Idaho, Kansas, Mississippi, Texas, Tennessee, Utah, and Wisconsin. Twenty-four states allow each academic institution to make their own individual decision and 16 states ban CCOC: California, Florida, Illinois, Louisiana, Maine, Michigan, Missouri, Nebraska, Nevada, New Jersey, New Mexico, New York, North Carolina, South Carolina, North Dakota, and Wyoming. Utah and Tennessee have unique concealed carry policies that apply to all public academic institutions in their individual states. Utah is the only state that barred academic institutions from prohibiting weapons on their campuses (Schildkraut, Carr, & Terranova, 2018). The State of Tennessee has a unique concealed carry policy where colleges and universities may only allow employees with a concealed carry permit to carry a concealed gun while on campus (Bishop, 2019; Ulfers, 2019). Knowing the concealed carry policy of each state allows employees who perceive safety on a campus that allows concealed carry to look for a position in states that allow CCOC.

With perceptions of safety uncertain after a mass shooting, the resolution of allowing CCOC is debated heavily (Shepperd et al., 2018). In 2006, Colorado allowed CCOC, with more academic institutions allowing concealed carry each year (Sandersen et al., 2018). Some employees and students feel safer knowing they can protect themselves and that an intruder may be deterred from coming to campus that allows concealed carry (Hsiao, 2018; Somers & Phelps, 2018). Other students and employees

believe that an individual could increase the danger trying to protect themselves during a mass shooting (Minshew, 2018). Not only do individuals have differences in their feeling of safety, the professors and students feel that their education is being jeopardized (Reed, 2016; Somers & Phelps, 2018). According to Hassett et al. (2020), campus concealed carry will continue to increase each year.

Summary

As the perception of safety on academic institutions intensifies with social media continuously covering mass shootings, it has created fear of another shooting happening at any time, to anyone, anywhere. This fear led to the public demanding a solution, and CCOC became a possible solution (Shepperd et al., 2018). When concealed carry became an option to make academic institutions safer, it unbridled the national topic of gun control (Wofford, 2017). National organizations seek to influence gun control legislation. The NRA is a proponent and the Brady Campaign is an opponent of CCOC (Fleming et al., 2018; Joslyn et al., 2017). Gun laws become stronger or weaker dependent on which political party is in office. The Supreme Court recognizes the Second Amendment as evidence that gun ownership is a right and not a privilege (Arrigo & Acheson, 2016; Vizzard, 2015). Recently gun legislation has been liberalized, allowing campuses the option to allow concealed carry (Bishop, 2019). Employees and students either perceive safety on a campus that allows concealed carry as an ability to protect themselves or feel more in danger with more weapons on campus (DeMitchell & Rath, 2019). Professors that oppose CCOC believe that their teaching must be adjusted in fear of upsetting an armed student (Reed, 2016; Somers & Phelps, 2018). As more academic institutions implement concealed carry policies, 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 institution. Understanding the perspectives of employees is important. Employees may be carrying a concealed carry weapon to protect themselves and their students, and will be teaching students who may also be armed. The perception of safety is the threat-appraisal process of the protection motivation theory and the decision to allow concealed carry on the campus is the coping-appraisal process of the possibility of a school shooter (Rogers, 1975). Thus, an individual may cognitively feel safer carrying a concealed gun. Lazarus (1966) argued that how we perceive events in life has direct psychological effects and mental events have biological outcomes. Cognitive appraisal theory explains why an individual feels unsafe and protection motivation theory depicts how individuals respond in an unsafe situation.

In Chapter Three, the researcher will describe the research design and methodology guiding the study. Chapter Four will contain the results of the data collected during the study and an analysis of the findings. Chapter Five concludes with a summary of the research findings and recommendations for further research.

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

With the proliferation of school shootings, academic institutions were forced to upgrade safety procedures in an effort to increase the security of their students and employees (Hsiao, 2018; Minshew, 2018; Wofford, 2017). Whether to allow or not allow concealed carry was one of the policy decisions academic institutions faced in that upgrade process (Miller, 2019). Concealed carry is a controversial issue in society and has become a major issue for academic institutions to decide whether to allow CCOC (Miller, 2019). Most colleges and universities added a concealed carry policy to their safety procedures in hopes of increasing the perception of safety on their campus (Merianos et al., 2017). The purpose of this causal-comparative study was to test the theory of protection and the cognitive appraisal theory that compared perceptions of safety of employees who worked at public colleges in the state of Tennessee that only allowed employees with a concealed carry permit to conceal carry versus public colleges in the state of Utah that allowed anyone with a concealed carry permit to conceal carry on campus. Utah and Tennessee had statewide concealed carry laws that applied to all public academic institutions (Bishop, 2019). Tennessee's law only allowed employees with a concealed carry permit to carry on campus (Bishop, 2019). Utah's law allowed any individual with a concealed carry permit to carry on campus.

In this chapter, the researcher explains how the casual-comparative study was used to formulate an approach to answering the research questions. The four research questions and null hypotheses for each question explored the differences in employees' perceptions of safety on campus based on the size of school, participant demographics,

and job position. Participants of the study and the selection of sample were described, as well as the research setting, research design, and methodology guiding the study. In the last section of Chapter Three, the explanation of the statistical analysis and summary is provided.

Research Questions

The following research questions guided the study.

1. What is the difference in employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    a. What is the difference in employees' perceptions of campus violence and victimization on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    b. What is the difference in employees' perceptions of support and conditions of CCOC where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    c. What is the difference in employees' perceptions of safety with guns on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
2. What is the difference in employees' perceptions of safety on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

a. What is the difference in employees' perceptions of campus violence and victimization on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
b. What is the difference in employees' perceptions of support and conditions of concealed carry on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
c. What is the difference in employees' perceptions of safety with guns on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

3. What is the difference in employees' perceptions of safety on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    a. What is the difference in employees' perceptions of campus violence and victimization on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    b. What is the difference in employees' perceptions of support and conditions of concealed carry on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

c. What is the difference in employees' perceptions of safety with guns on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

4. What is the difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    a. What is the difference in part-time versus full-time employees' perceptions of campus violence and victimization on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    b. What is the difference in part-time versus full-time employees' perceptions of support and conditions of CCOC where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?
    c. What is the difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

Null Hypotheses

1. $H_0$1: There is no statistically significant difference in employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.

2. $H_0$1a: There is no statistically significant difference in employees' perceptions of campus violence and victimization on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
3. $H_0$1b: There is no statistically significant difference in employees' perceptions of support and conditions of CCOC on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
4. $H_0$1c: There is no statistically significant difference in employees' perceptions of safety with guns on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
5. $H_0$2: There is no statistically significant difference in employees' perceptions of safety on rural versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
6. $H_0$2a: There is no statistically significant difference in employees' perceptions of campus violence and victimization on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
7. $H_0$2b: There is no statistically significant difference in employees' perceptions of support and conditions of concealed carry on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.

8. $H_0$2c: There is no statistically significant difference in employees' perceptions of safety with guns on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
9. $H_0$3: There is no statistically significant difference in employees' perceptions of safety on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
10. $H_0$3a: There is no statistically significant difference in employees' perceptions of campus violence and victimization on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
11. $H_0$3b: There is no statistically significant difference in employees' perceptions of support and conditions of concealed carry on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
12. $H_0$3c: There is no statistically significant difference in employees' perceptions of safety with guns on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
13. $H_0$4: There is no statistically significant difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed

to carry concealed guns versus where anyone with a concealed carry license may carry?

14. $H_0$4a: There is no statistically significant difference in part-time versus full-time employees' perceptions of campus violence and victimization on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
15. $H_0$4b: There is no statistically significant difference in part-time versus full-time employees' perceptions of support and conditions of CCOC where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.
16. $H_0$4c: There is no statistically significant difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry.

Participants

The participants in this study were employees in public academic institutions in the states of Utah and Tennessee. Within the state of Utah there were nine public academic institutions included in the study. Of the nine public academic institutions five were classified as large and the other four were classified as medium, according to The Carnegie Classification of Institutions of Higher Education (2017). Within the state of Tennessee there were 24 public academic institutions in the study. Of the 24 public academic institutions 10 were classified as large and 14 medium (The Carnegie Classification of Institutions of Higher Education, 2017). The researcher contacted each

University president to seek permission to conduct the study. A total of 602 viewed the survey, 459 individuals started the survey, and 394 participants completed the survey. Participants were asked to provide demographic information about themselves, including gender, academic rank, political affiliation, size of academic institution, the state of employment, years of service, and employment status (part-time or full-time). The responses to the demographic questions were used to compare whether statistically significant differences existed between the groups. The demographics of the participants were 88.6% White, 85% full-time employees, 70% Tennessee employees, and 31% had a concealed carry license. The researcher included 384 participants and excluded 10 participants. Participants were excluded if they did not finish the survey completely, submitted multiple responses, or if they asked to be removed from the study.

Precautions were taken to mitigate risks to participants of the study, thus guaranteeing confidentiality and anonymity. The researcher used QuestionPro to ensure the confidentiality and anonymity in responses collected. Due to the sensitivity of perceptions explored, the researcher safeguarded the participants from being identified by their response. An informed consent (Appendix A) was provided to each participant detailing the purpose of the study and clearly stating that the responses would be confidential and anonymous.

Procedures

The Southwest Baptist University Research Review Board (RRB) reviewed and approved the research (Appendix B). If a participating institution required its institution's review board's approval to participate, an application was submitted to their review board for approval, as well. A synopsis of the study, instrument, informed

consent documents, and timeframe outlining the study were emailed to the president and/or chancellors of all public academic institutions in the states of Tennessee and Utah requesting permission for their institution to participate in the study (Appendix C). With approval from the president or chancellor, the modified survey (Appendix D) and the assurance of anonymity and confidentiality (Appendix A) was emailed to all employees. When permission was granted, the researcher worked with specified staff to conduct the research. A link to the survey was sent via email to all employees with a 2-week deadline. A follow-up email (Appendix E) was sent 1 week after the deadline to encourage participants to respond. After the 1-week extension the survey stopped accepting responses, which concluded the data collection process.

The survey was created in the QuestionPro application. As a design control, QuestionPro was used because it allows for automatic responses and was a consistent surveying tool for all participants to use. QuestionPro creates a unique link, which was embedded in an email that included the purpose of the study and clearly stated that the participant's responses would be confidential and anonymous. Protecting the identity of the participants was intentional for the study to receive more honest and unbiased responses, since the topic of gun rights is controversial.

The researcher sent out the survey soliciting responses for this study in the fall of 2021. 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. The completion rate of the survey was 86% with 30% from academic institutions in Utah and 70% in Tennessee. On October 20th, the collection window ended. To conclude, the data from QuestionPro were downloaded into Microsoft Excel for data cleaning and entry

into Statistical Package for the Social Sciences (SPSS). Data will be kept by the researcher on secured drives for 3 years, and then destroyed.

Selection and Sampling

Participant selection was nonrandom, purposive sampling. Participants were limited to employees who worked in public academic institutions in Utah and Tennessee. These participants were chosen because each state had unique CCOC laws (Bishop, 2019; Ulfers, 2019). Other states had conflicting laws within the state, which would have caused onerous data collection requirements. The state of Tennessee only allowed employees who have a concealed carry license to carry on campus and Utah allowed anyone with a concealed carry license to carry on campus (Bishop, 2019; Schildkraut, Carr, & Terranova , 2018). The state of Utah included 10 public academic institutions and the state of Tennessee included 24 public academic institutions (CollegeSimply, 2021a; 2021b).

To determine employees' perceptions of CCOC 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 (Gay, Mills, & Airasian, 2009). In this study, the nonprobability sampling was purposive as only employees were chosen as participants. Additionally, the survey left it up to the individuals to complete the survey, leaving no control over the breakdown of demographics of the respondents. Sample size calculations were made to determine the needed number of responses to have an alpha level of .05, a power of .8, and a medium effect size (Laerd Statistics, 2018). The sample size needed was 51 from Utah and 51 from Tennessee, for a total of 102. For four independent sample *t* tests with two

groups, 102 responses were needed. There were 115 respondents from the state of Utah and 271 respondents from the state of Tennessee.

Research Setting

At the time of the current study, in the United States, 12 states allowed concealed carry of anyone who had a concealed carry permit, 22 states let the individual academic institution decide their policy on CCOC, and 16 states prohibited CCOC ("An updated list," 2020). The research setting included public academic institutions in the states of Utah and Tennessee. The researcher used the Perceptions Regarding Carrying Concealed Handguns on University Campuses survey (Thompson, Price, Dake, & Teeple, 2013). Some employees and students felt safer knowing they could protect themselves and that an intruder may be deterred from coming to campus that allowed concealed carry (Hsiao, 2018; Somers & Phelps, 2018). Other students and employees believed that an individual who is carrying a concealed gun could increase the danger trying to protect themselves during a mass shooting (Minshew, 2018). According to Hassett et al. (2020), campus concealed carry will continue to increase each year.

The setting was limited to these two states because surveying every academic institution in the United States was too broad, and these two states had statewide concealed carry policies. The state of Utah included 10 public academic institutions and the state of Tennessee included 24 public academic institutions (CollegeSimply, 2021a, 2021b). Public institutions were selected because they were required by law to allow concealed carry to keep state funding. Private academic institutions are exempted from following the state's concealed carry law (Gius, 2019). The setting of public institutions in Utah and Tennessee was chosen because they had unique concealed carry policies that

were the same for all public academic institutions within each state (Bishop, 2019; Schildkraut, Carr, & Terranova, 2018). Tennessee only allowed employees to conceal carry on campus and Utah allowed anyone with a concealed carry license to carry on campus (Bishop, 2019). The Perceptions Regarding Carrying Concealed Handguns on University Campuses survey (Thompson, Price, Dake, & Teeple, 2013) was selected because it applied descriptive statistics to quantify gun ownership, background with weapons, campus violence and victimization, attitude toward concealed carry, and safety perceptions.

Research Design

To answer the four research questions of the study, a quantitative study was chosen. A quantitative study is the collection of numerical data to explain a phenomenon (Gay et al., 2009). Since the study was only collecting numerical data, the study could not be qualitative where the data collected was narrative or a mixed method where numerical and narrative data are collected. Experimental research is where one independent variable is manipulated, and the researcher observes the cause and effect. Nonexperimental research lacks the manipulation of the independent variable (Gay et al., 2009). This study did not manipulate the independent variable and therefore was a nonexperimental study, specifically a casual-comparative design. In a casual-comparative study the researcher attempts to determine the difference between groups (Gay et al., 2009). A casual-comparative study was used to collect numerical data from employees about their perceptions of safety on a campus that allows concealed carry. A correlational study would not have worked for this study because a correlational study determines to what degree a quantifiable relationship exists. The study compared

perceptions of safety of employees on campuses that allowed concealed carry in Tennessee and Utah. The comparison between the independent and dependent variables in each of the four sections of research questions examined the differences between employees' perceptions of safety on campuses that allowed concealed carry in Tennessee and Utah. Three independent *t* tests were used to determine the differences between the two groups.

All employees at public academic institutions in Utah and Tennessee that were given permission from their chancellor or president were invited to participate in the study. A survey was used to gather data that applied descriptive statistics to quantify gun ownership, background with weapons, campus violence and victimization, attitude toward concealed carry, and safety perceptions. A survey was used to allow the researcher to survey large sample sizes in an efficient amount of time. The survey was modified from the original Perceptions Regarding Carrying Concealed Handguns on University Campuses survey (Thompson, Price, Dake, & Teeple, 2013). The reliability of the Perceptions Regarding Carrying Concealed Handguns on University Campuses survey was validated in the original study using a Cronbach's alpha for internal reliability. The survey was found to be highly reliable with $\alpha = .901$ (Thompson, Price, Dake, & Teeple, 2013). The original survey was created by six experts in firearms, which demonstrated the content validity of the instrumentation. In this study, the survey was modified, with permission from the original authors, and a pilot was given on a sampling of Arkansas and Kansas academic institutions to calculate the reliability and validity of the modified Perceptions Regarding Carrying Concealed Handguns on University Campuses survey.

The process of principal components analysis (PCA) is to take a large set of variables and reduce them into a smaller set of variables that retains the majority of the information in the larger set of variables (Jaadi, 2021). The next step in the process was to make sure that the standardization was accurate, to prevent biased results (Laerd Statistics, 2018). Once standardization was computed all the variables were converted to the same scale. The goal of the PCA is to ensure the largest possible variance (Jaadi, 2021). The data from the modified survey were analyzed using SPSS software to determine whether or not to accept or reject the null hypotheses.

To use PCA there were five assumptions that had to be met. The first assumption was that the survey had multiple variables measured at the continuous level and the perception of safety survey met this assumption using questions using a range of Likert scales (Laerd Statistics, 2018). This assumption ensured that there were multiple variables and that each question had the same equal weight. For example, all Likert scale questions on the perceptions of safety survey have a 4-point scale. The second assumption that the survey used was that there was a linear relationship between the variables. A linear relationship is when the variables align in a linear manner to form a data set that exhibits the relationships among the variables. The third assumption was met because the data were able to be reduced using Bartlett's Test of Sphericity. For data to be reduced there must be enough correlations between the variables for the variables to be reduced into a smaller number of components. The fourth assumption that must be met to effectively use principal component analysis is sampling adequacy (Laerd Statistics, 2018). Sampling adequacy means that the sample size was large enough to provide a reliable result. For example, asking 150 people a question would provide a

more reliable result than asking only 15 people. The fifth assumption is that there are no significant outliers. Outliers are pieces of data that differ significantly from the other data points. If there are outliers, those pieces of data could influence the result disproportionately.

The PCA process includes dimension reduction (Laerd Statistics, 2018). The goal is to demonstrate the pilot's PCA results support that the instrument is composed of these three constructs. The perception of safety survey used has three constructs that were run using *t* tests. Constructs 1, 2, and 3 met all the assumptions and PCA was able to be run. The first construct was campus violence and victimization that used a Likert scale. The second construct was support and conditions of CCOC. This construct included 10 questions that used the Likert scale as answers. The third construct was the safety perceptions with weapons and included 12 questions that used the Likert scale.

The first step of PCA was to take data from the survey to compare the statistical differences between perceptions of safety of employees who worked on a campus that only allowed employees to CCOC versus campuses that allowed anyone with a concealed carry license to carry a concealed gun on campus and put them into an Excel spreadsheet. The results from the assumption tests included that the sampling was adequate, data were able to be reduced with Bartlett's Test of Sphericity, and that there were not any significant outliers (Laerd Statistics, 2018). Before moving on to the second step all five assumptions had to be met. The second step was to evaluate the initial extraction of components. This step gave initial data on the major components extracted and the variance of each component. To determine the number of meaningful components a scree plot was used. A scree plot provided the variance that was associated with each

factor. The factors with a higher variance were more meaningful and were kept. The selected factor rotation method used was Varimax factor rotation, which simplified the interpretation of the factors. The rotation was designed to maximize the variance of the components and provide data on which factors were meaningful. The goal was to create a simple structure that provided understanding of any significant differences discovered. The number of components retained was three. The next step was to interpret the final revised total variance explained output from SPSS and rotated components. The final step after the analysis was to assign a score to each component for each participant through component-based scores (Laerd Statistics, 2018). The score showed which variables were associated with each individual component.

The Cronbach's alpha was chosen to test the reliability of the survey since it could be used with continuous data, nondichotomous data, and surveys that included a Likert scale (StatsDirect, 2020). Cronbach's alpha increases when the correlations between variables increase, which allowed the researcher to test the internal consistency of the survey being used. The maximum value for the Cronbach's alpha was 1 and the minimum was 0, with a score of 0.7 being considered reliable. Questions on the survey that asked the same thing but in a reverse wording needed to be scored accurately to ensure the Cronbach's alpha was accurate (Laerd Statistics, 2018). To determine if the questions in the perception of safety survey all reliably measured the same variable in each of the three constructs, three Cronbach's alpha were run. The survey used in the study had a Cronbach's alpha of 0.928 for Component 1, 0.58 for Component 2, and 0.740 for Component 3.

Instrumentation

The Perceptions Regarding Carrying Concealed Handguns on University Campuses survey (Thompson, Price, Dake, & Teeple, 2013) was modified and used to measure the perceptions of safety (Appendix F). The original survey (Appendix F) was chosen because it used descriptive statistics to quantify gun ownership, background with weapons, campus violence and victimization, attitude toward concealed carry, and safety perceptions. Dr. Thompson gave permission to use (Appendix G) and modify the Perceptions Regarding Carrying Concealed Handguns on University Campuses survey for this study.

The survey was broken into five sections. The first section was the demographic and background of the respondents, and the next four sections correlated to the two theoretical frameworks. Sections 2 through 4 give data on the history of gun ownership, campus violence respondents had experienced, and how supportive they perceived others to feel about their safety on campus. The last section was the respondent's safety perceptions with weapons. The purpose of the five sections was to have all necessary data to examine the correlation between the respondent's background with weapons and their perceptions of safety on a campus that allowed CCOC. The format of the survey included yes/no questions and 4-point Likert scale questions. The Likert scale quantified the perceptions of safety of the respondent from *Strongly agree* to *Strongly disagree*.

The first section was the demographic and background information of the respondents. Participants were asked to identify if they worked on a campus that allowed concealed carry, their gender, nationality, position, political affiliation, years of service, employment status, size of academic institution, if their academic institution was rural or

urban, and the state in which they worked. The intent of acquiring this data was to compare whether statistically significant differences existed between the groups studied.

The second section of the survey was about the gun ownership and gun ownership background of the participants. Research indicates that individuals that have a background with weapons will perceive safety on a campus that allows concealed carry (Shepperd et al., 2018). The survey asked if the participants owned a firearm and/or if they had one in their home growing up and if they did own a firearm, why they owned the weapon. The next question asked the participant if they belonged to a firearm organization. There is a known effect that national organizations have influence in the legislation (Arrigo & Acheson, 2016; Kamal & Burton, 2018; Price et al., 2014; Richards, 2017). The last two questions asked the participant if they had any formal firearms training and if they had a valid concealed carry permit.

The third section explored campus violence and victimization of participants. These questions quantified participants' experiences of violence on and off campus, including their perceptions of campus safety. Perception of safety is based on experiences. If a participant has been a victim, he/she may have perceived safety on a campus that allowed concealed carry. Questions 21-23 included an offense list with definitions. Participants were able to choose multiple offenses. The other seven questions addressed campus safety and security threats.

The fourth section addressed how much the participant personally supported concealed carry, which quantified the participants' support of CCOC. All the questions in this section used a Likert scale with four options. The Likert scale was used to establish internal consistency reliability.

The first four questions asked the participant how supportive of individuals concealed carrying. The options on the Likert scale were 1 = *not supportive at all*, 2 = *not very supportive*, 3 = *supportive*, and 4 = *very supportive*. The next two questions addressed how safe the participant felt if staff and/or students carried concealed guns on campus. The options on the Likert scale were 1 = *very unsafe*, 2 = *somewhat unsafe*, 3 = *slightly safer*, and 4 = *much safer*. Some individuals felt safer with campuses that only allowed employees with a concealed carry permit to carry concealed guns and other individuals felt safer where anyone could carry a concealed gun with a permit (Hsiao, 2018; Somers & Phelps, 2018). The last two questions asked the participant if they would perceive safety if the individual had to take formal training and periodically practice to CCOC. The options on the Likert scale were 1 = *strongly agree*, 2 = *agree*, 3 = *disagree*, and 4 = *strongly disagree*. These questions in Table 1 addressed the arguments that individuals feel safer when they knew that anyone with a permit had formal training.

Table 1

Likert Scale

Question	Likert Scale Responses
How supportive of individuals to concealed carry?	1 = not supportive at all, 2 = not very supportive, 3 = supportive, and 4 = very supportive.
How safe the participant feels if staff/students CCOC.	1 = very unsafe, 2 = somewhat unsafe, 3 = slightly safer, and 4 = much safer.
Perception of safety if more restrictions to CCOC were mandatory.	1 = strongly agree, 2 = agree, 3 = disagree, and 4 =strongly disagree.

The last section addressed the participants' safety perceptions. The questions addressed the arguments for and against allowing CCOC. The 13 questions were organized into three subgroups to measure individual protection, individual safety, and the negative effects of concealed carry. The response options used the Likert scale were 1 = *strongly agree*, 2 = *agree*, 3 = *disagree*, and 4 = *strongly disagree* for the entire section of questions. Scoring of the survey was conducted with a predefined answer key. A score of 33-66 would indicate feeling safe on a campus that allowed concealed carry and a score of 0-32 would indicate not feeling safe on a campus that allowed CCOC.

The Perceptions Regarding Carrying Concealed Handguns on University Campuses survey (Thompson, Price, Dake, & Teeple, 2013) was modified (Appendix F). If the methodology of the survey had been proven invalid or unreliable, then the study would not have been meaningful. To determine the reliability and validity of the survey, a pilot survey was conducted. The piloting process was necessary because the original survey was modified with permission from the authors. The design of the survey was the same as the survey used for the study, which included three constructs that met the assumptions to perform principal components analysis. The first construct was campus violence and victimization. The second construct was support and conditions of CCOC. The third construct was the safety perceptions with weapons. To determine if the questions in the perception of safety survey all reliably measured the same variable in each of the three constructs, three Cronbach's alpha were run.

The pilot survey was sent to all employees of three public colleges in the state of Arkansas and two in the state of Kansas to determine the PCA and reliability calculation. There was a total of 30 responses. A limitation of the pilot process was the number of

responses that affected the Cronbach's alpha. The minimum sample size needed for the research to be effective was 51 from Utah and 51 from Tennessee for a total of 102. Sample size calculations were made to determine the needed number of responses to have an alpha level of .05, a power of .8, and a medium effect size (Laerd Statistics, 2018). For three independent sample *t* tests with two groups, 102 responses were needed. There were 115 respondents from the state of Utah and 271 respondents from the state of Tennessee.

The pilot process provided the researcher with sample data and assessed the data collection instrument and insight on how to modify the survey to achieve desired results. The pilot process provided potential problem areas before sending out to the participants of the larger study. The process additionally provided the approximate time to complete the survey, the participants' ability to comprehend the instructions, and confirmed that the terms used in the survey were written accurately (Laerd Statistics, 2018). The pilot study was conducted and provided evidence that the modified survey was a reliable data collection instrument because of the researcher's PCA and reliability calculations.

I'm Here

Data Analysis

Data analysis started with data cleaning. Duplicate responses were removed, and incomplete surveys were omitted. Participants were asked to provide the following demographic information about themselves: gender, academic rank, political affiliation, size of academic institution, the state in which they worked, years of service, and whether they worked part-time or full-time. The responses to the demographic questions were further examined to explore if there were other statistically significant differences that

existed between the groups studied. The demographic question asking if the participant was a full-time or part-time employee was aggregated to identify whether a difference of safety perception existed between the two groups. The first two sections, demographics and gun ownership, were calculated using descriptive statistics to identify the number of the overall sample of each group. The researcher included 384 and excluded 10 participants.

The independent *t* test was selected for this study. The independent *t* test is an inferential statistical test that determines whether there is a statistically significant difference between the means in two unrelated groups (Laerd Statistics, 2018). Twelve independent *t* tests were used to determine if there was a statistically significant difference in perceptions of safety between employees who worked on campuses that allowed only employees to concealed carry versus those who worked on campuses that allowed anyone to concealed carry. A *t* test was run for Constructs 1, 2, and 3 for each of the four research questions, totaling 12 *t* tests. The researcher sought to determine whether the data would have a statistically significant difference in perceptions of safety between rural versus urban campuses. Research supported that concealed carry permits are sold more in rural areas that have a culture of hunting (Schildkraut, Carr, & Terranova, 2018; Turchan et al., 2017; Woldoff et al., 2017). The goal was to determine if there was a statistically significant difference in perceptions of safety between large versus medium campuses. Certain safety measures work more effectively on smaller campuses due to the smaller size of the campus compared to large open campuses (King & Bracy, 2019). The goal was to determine if there was a statistically significant difference in perceptions of safety between part-time versus full-time employees. Full-

time employees spend more time on campus, which may influence their perception of safety on a campus that allows CCOC.

The data were inputted into the SPSS program and 12 independent *t* tests were conducted to analyze the data. The program provides a group statistics table that includes the mean, standard deviation, and standard error mean. The study had 16 null hypotheses, which meant the researcher would conduct three independent *t* tests for each of the four research questions in the SPSS program. The null hypotheses for each of those *t* tests targeted the three measurable constructs as verified through PCA and Cronbach's alpha. The *p*-value was calculated to determine whether the null hypotheses of the four research questions were rejected with a maximum alpha level of .05. An independent samples *t* test was conducted for each of the 12 null hypotheses to determine whether a statistically significant differences was found between the groups. The independent samples *t* test compares the means of two independent groups, in this case, employees in academic institutions in Utah and Tennessee, to determine whether the null hypotheses were rejected.

The *p*-value of the independent *t* test for the first null hypothesis, that there is no statistically significant difference in employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry, was $p = < 0.00$ for perception of safety, $p = < 0.00$ for victimization, and $p = 0.006$ for support and conditions. The *p*-value of the independent *t* test for the second null hypothesis, that there is no statistically significant difference in employees' perceptions of safety on rural versus urban campuses that allow concealed carry, was $p = 0.005$ for perception of safety, $p = 0.001$ for victimization, and $p = 0.001$

for support and conditions. The *p*-value of the independent *t* test for the third null hypothesis, that there is no statistically significant difference in employees' perceptions of safety on large versus medium campuses that allow concealed carry, was $p = 0.909$ for perception of safety, $p = 0.023$ for victimization, and $p = 0.723$ for support and conditions. The *p*-value of the independent *t* test for the fourth null hypothesis, that there is no statistically significant difference in employees' perceptions of safety on campus between full-time and part-time employees, was $p = 0.270$ for perception of safety, $p = <$ 0,00 for victimization, and $p = 0.183$ for support and conditions. If there was a significant difference between the two groups, the significance value of the two-tailed test of statistical significance would be less than 0.05.

The first research question examined the difference in perceptions of safety between campuses that only allowed employees with a concealed carry permit to CCOC versus campuses that allowed anyone with a permit to CCOC. Section 4 supported and conditions questions and Section 5 safety perceptions addressed this research question. The second research question examined the difference in perceptions of safety between campuses in rural areas versus campuses in urban areas. Section 2 gun ownership and gun ownership background questions addressed this research question. Research has shown that an individual that lives in rural areas who were brought up around firearms may perceive safety on a campus that allows concealed carry (Schildkraut, Carr, & Terranova, 2018; Turchan et al., 2017; Woldoff et al., 2017). The third research question examined the difference of safety perceptions between large campuses versus medium campuses. Section 3 campus violence and victimization addressed this research question. Research has revealed that larger campuses are harder to protect than smaller campuses

(Hsiao, 2018; Somers et al., 2020). The standard deviation and mean were calculated for each research question. The first research question, the victimization component, Utah had *M* = 14.03, *SD* = *1.845* and Tennessee had *M* = 12.46, *SD* = 2.162. The first research question, the support and conditions component, Utah had *M* = 10.12, *SD* = 1.505 and Tennessee had *M* = 9.64, *SD* = 1.655. The first research question, the perceptions of safety component, Utah had *M* = 34.99, *SD* = 7.922 and Tennessee had *M* = 30.29, *SD* = 7.339. The second research question, the victimization component, rural had *M* = 13.40, *SD* = 2.019 and urban had *M* = 12.63, *SD* = 2.237. The second research question, the support and conditions component, rural had *M* = 10.11, *SD* = 1.526 and urban had *M* = 9.58, *SD* = 1.645. The second research question, the perceptions of safety component, rural had *M* = 33.07, *SD* = 7.141 and urban had *M* = 30.85, *SD* = 8.018. The third research question, the victimization component, large campuses had *M* = 13.18, *SD* = 2.119 and medium campuses had *M* = 12.67, *SD* = 2.246. The third research question, the support and conditions component, large campuses had *M* = 9.81, *SD* = 1.617 and medium campuses had *M* = 9.75, *SD* = 1.637. The third research question, the perceptions of safety component, large campuses had *M* = 31.74, *SD* = 8.083 and medium campuses had *M* = 31.74, *SD* = 8.083. The fourth research question, the victimization component, part-time employees had *M* = 13.90, *SD* = 1.880 and full-time employees had *M* = 12.75, *SD* = 2.202. The fourth research question, the support and conditions component, part-time employees had *M* = 9.98, *SD* = 1.132 and full-time employees had *M* = 9.75, *SD* = 1.697. The fourth research question, the perceptions of safety component, part-time employees had *M* = 32.74, *SD* = 8.271 and full-time employees had *M* = 31.50, *SD* = 7.725.

An independent *t* test was chosen because the study needed to determine the difference between two unrelated groups. There are six assumptions for each *t t*est. Assumptions are basic requirements needed to run the statistics (Gay et al., 2009). The first assumption was the assumption that the dependent variable would be measured on a continuous scale (Laerd Statistics, 2018). This study used the Likert scale, which assumed that the difference between points on the scale were all equal. The second assumption was that the independent group had two categorical independent groups. For this study, one independent group was the employees who worked in Tennessee and the second group was the employees who worked in Utah. The third assumption was that there was independence of observation, meaning that there had to be different participants in each group. Since employees worked in different states the third assumption was met. The fourth assumption was that there would be no significant outliers. Outliers are pieces of data that differ significantly from the other data points. If there were outliers, those pieces of data could have influenced the result disproportionately. The fifth assumption was that the dependent variable should be approximately normally distributed for each group of the independent variable. The Shapiro-Wilk test for normality was used and if the significant value was above 0.05 then the data were considered normal. The sixth assumption was that there needs to be homogeneity of variance. This means that if the *p*-value is less than 0.05 then the assumption of homogeneity of variance has been violated (Laerd Statistics, 2018).

An independent *t* test required the setup of the independent variable and the dependent variables in SPSS. In SPSS statistics the group variable was inputted with two groups created for analysis; the first group was the employees who worked in the state of

Tennessee and the second group was the employees who worked in the state of Utah. The test variables that were the dependent variables were inputted. The survey used includes a Likert scale, which required ordinal data to be inputted. Once all the data were entered into SPSS the data were analyzed to compare means through independent samples *t* tests. The dependent variables were placed into the test variable section and the independent variables were placed into the grouping variable. Tennessee was coded as 1 and Utah was coded as 2 as the categorical independent variables in the value box. The statistics test details included the alpha level, what would be reported, and effect size. An alpha of .05 was the acceptable probability value where an alpha above .05 represented a failure to reject the null hypothesis and an alpha value below .05 represented the rejection of the null hypotheses. Using the results from the independent samples *t* test, the standardized effect size was calculated using Cohen's *d*. The effect size was measured using Cohen's *d* formula where a small effect was 0.2, medium effect was 0.5, and a large effect was 0.8 (Laerd Statistics, 2018). The goal of the independent *t* test was to prove if there was a mean difference of perceptions of safety between employees that worked in the state of Tennessee or Utah, which both had statewide concealed carry laws on public campuses based on the sample data.

After the analysis of data, the following aspects of the study were reported. The number of participants in each of the independent groups was reported and further analyzed based on size of school, rural versus urban, and whether the participant worked part-time or full-time. The Shapiro-Wilk's test was used to ensure that data were normal, and if the significant value was above 0.05 then the data were considered normal. The report of homogeneity of variances was additionally reported. This meant that if the *p*-

value was less than 0.05, then the assumption of homogeneity of variance had been violated. Four independent samples *t* tests were run to determine if there were any statistically significant differences in perceptions of safety between employees who worked in Tennessee and employees who worked in Utah. The independent samples *t* test compares the means of two independent groups, in this case, employees in academic institutions in Utah and Tennessee, to determine whether the null hypotheses were rejected. Each of the 16 null hypotheses were reported as reject or fail to reject.

Summary

The researcher sought employees' perceptions of safety from those who worked in public academic institutions on campuses that allowed concealed carry in Tennessee and Utah. For the four independent sample *t* tests, with two groups, the study needed 102 responses to satisfy the randomness test. The research setting was public academic institutions in the states of Utah and Tennessee. Descriptive statistics were applied to quantify gun ownership, background with weapons, campus violence and victimization, support of concealed carry, and safety perceptions in this quantitative study. The Perceptions Regarding Carrying Concealed Handguns on University Campuses survey was used with permission of the author (Thompson, Price, Dake, & Teeple, 2013). Data were analyzed using SPSS. Independent samples *t* tests were conducted for each of the four null hypotheses to explore whether a statistically significant differences existed between the groups studied. Chapter Four will contain the results of the data collected during the study and an analysis of the findings. Chapter Five concludes with a summary of findings and recommendations for future studies.

CHAPTER FOUR

ANALYSIS OF THE DATA

Introduction

In response to campus shootings and perceptions of safety being questioned, academic institutions were forced to increase safety protocols and procedures, including a policy on CCOC (Hsiao, 2018). Understanding how previous campus shootings and the possibility of future shootings affect perceptions of safety of campus employees is critical to promote effective campus safety policies (Silva & Capellan, 2019a). The purpose of this casual-comparative study was to examine the perceptions of safety of employees who worked at colleges that only allowed employees with a concealed carry permit to carry concealed guns versus colleges that allowed anyone with a concealed carry permit to carry concealed guns on campus. The research was conducted at public academic institutions in Tennessee and Utah. These two states had different laws about who was permitted to conceal carry on campus (Bishop, 2019; Schildkraut, Carr, & Terranova 2018). Utah allowed any individual that had a concealed carry permit to carry on campus (Schildkraut, Carr, & Terranova, 2018). Tennessee only allowed employees with a concealed carry permit to carry on campus (Bishop, 2019). Participants were asked to rate their perception of safety on campus, their perception of victimization, and their support and conditions of CCOC through answering the Perceptions of Safety survey.

Employees are either proponents or opponents of CCOC. To understand employees' perceptions of safety, two theoretical frameworks, cognitive appraisal theory (Lazarus, 1966) and protection motivation theory (Rogers, 1975), were used to explain how perceptions are formed. In addition, the differences of perceptions of safety on

campuses that allowed only employees and campuses that allowed anyone with a concealed carry license to CCOC were compared between rural and urban campuses, large and medium campuses, and full-time and part-time staff. There has been research studying the perceptions of students, but little on the perceptions of employees (Bishop, 2019; Hassett et al., 2020; Schildkraut, Carr, & Terranova, 2018).

Validity and Reliability

A principal components analysis was run on the 27-question survey that measured employee perceptions of safety between public academic institutions in Utah and Tennessee. The suitability of PCA was assessed prior to analysis. The correlation matrix showed that there was no correlation. The overall Kaiser-Meyer-Olkin measure was 0.516, classification of "miserable" (Laerd Statistics, 2018). Bartlett's test of sphericity was statistically significant ($p < 0.001$), indicating that the data were likely factorizable. The safety perception factor analysis is presented in Table 2.

Table 2

Safety Perception Factor Analysis Matrix

Factor Test	Value
Kaiser-Meyer-Olkin	.516
Bartlett's Test of Sphericity	$p < 0.001$

Principal component analysis revealed three components that had eigenvalues greater than 1 and that explained 35%, 11%, and 9% of the total variance, respectively. The three-component solution explained 55% of the total variance. As part of the validity and reliability, nine questions had to be reverse coded. Three questions in each component were reverse coded; these questions have a T next to them in Table 4. A Promax with Kaiser normalization rotation was employed to aid interpretability. The

interpretation of the data was consistent with the safety perceptions survey, which was designed to measure safety perception items on Component 1, victimization items on Component 2, and support and condition items on Component 3. The Cronbach's alpha for Component 1 was above the accepted value of 0.7 and Component 3 was right at the accepted value of 0.7. However, Component 2 was below the accepted value of 0.7, but the researcher proceeded with this instrument anyway. Table 3 shows the results of the Cronbach's Alpha for each of the three components and Table 4 shows the component matrix.

Table 3

Safety Perception Reliability Statistics Matrix

Component	Cronbach's Alpha	Number of Items
1	0.928	14
2	0.580	5
3	0.740	5

Table 4

Safety Perception Rating Component Matrix

Component	1	2	3
Q1		0.578	
Q2T			0.514
Q3T		0.562	
Q4	0.583		
Q5T		0.450	
Q6T		0.650	
Q7	0.722		
Q8	0.780		
Q9	0.749		0.575
Q10	0.745		
Q11	0.638		0.416
Q12	0.667		0.708
Q13	0.697		
Q14			0.605
Q16T	0.409		0.456
Q17T	0.458		0.407
Q18		0.732	
Q19	0.622		0.483
Q20	0.579		0.703
Q21	0.566		
Q22T	0.681		
Q23T	0.498		0.761
Q24	0.795		0.634
Q25	0.793		0.668
Q26T	0.758		
Q27	0.899		

Note. T = Reverse Coded.

Descriptive Statistics

The survey was sent with a 2-week window, which allowed for completion. Once the survey was closed to participants, the data were downloaded into Microsoft Excel to

clean the data prior to entering it into the SPSS. Participants were eliminated if they did not complete the survey entirely. There was a total of 386 total responses from employees who worked in public academic institutions in the states of Utah and Tennessee. The results included responses from 251 females and 135 males. The racial background of the participants was 90% White, 4% Black, 2% Hispanic, 1% American Indian- White, and 3% other. Of the 386 participants, 214 owned a gun, and 120 had a concealed carry license. There was a total of 271 participants from employees who worked in Tennessee and 115 employees who worked in the state of Utah. The data included predominately full-time employee participants, which included 328 of the 386 responses. There were 243 urban academic participants and 143 rural academic participants.

Data Analysis and Findings

Data were inputted into the SPSS program and 12 independent *t* tests were conducted to analyze the data. The program provided a group statistics table that included the mean, standard deviation, and standard error mean. The study had 16 null hypotheses, and three independent *t* tests for each of the four research questions in the SPSS program. The null hypotheses for each of those *t* tests targeted the three measurable constructs as verified through PCA and Cronbach's alpha. The *p*-value was calculated to determine whether the null hypotheses of the four research questions were rejected with a maximum alpha level of .05. An independent samples *t* test was conducted for each of the 12 null hypotheses to determine whether a statistically significant difference was found between the groups. If there was a significant difference

between the two groups, the significance value of the two-tailed test of statistical significance would be less than 0.05.

Q1a: Utah versus Tennessee: Perceptions of victimization. There were 115 Utah participants and 271 Tennessee participants. An independent samples *t* test was run to determine if there were significant differences in perceptions of victimization between employees who worked in public academic institutions in the states of Utah and Tennessee. There was one outlier in the Utah data and three outliers in the Tennessee data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample t test was robust against non-normal distributions. The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances, $p = 0.031$. Since the variance was violated, the researcher used the adjustment outputted by the SPSS to account for the violation. Employees who worked at public academic institutions in Utah perceived feeling less victimized, $M = 14.03$, $SD = 1.845$, than employees who worked at public academic institutions in Tennessee, $M = 12.46$, $SD = 2.162$, a statistically significant difference, $M = 1.579$, 95% *CI* [1.153, 2.004], $t(248.816) = 7.309$, $p < 0.001$. The *p*-value, $p < 0.001$, was statistically significant; therefore, the null hypothesis was rejected. The effect size was considered large, Cohen's $d = 0.8$. Table 5 provides the results of the Independent Samples *t*-Test.

Table 5

Utah Versus Tennessee t Test for Perception of Victimization

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	7.309	248.816	< 0.001	1.579	0.216	1.153	2.004

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q1b: Utah versus Tennessee: Perceptions of support and conditions. There were 115 Utah participants and 271 Tennessee participants. An independent samples *t* test was run to determine if there were significant differences in perceptions of support and conditions between employees who worked in public academic institutions in the states of Utah and Tennessee. There was one outlier in the Utah data and one outlier in the Tennessee data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, $p = 0.097$. Employees who worked at public academic institutions in Utah perceived higher support and conditions, $M = 10.12$, $SD = 1.505$, than employees who worked at public academic institutions in Tennessee, $M = 9.64$, $SD = 1.655$, a statistically significant difference, $M = 0.482$, 95% *CI* [0.129, 0.835], $t(385) = 2.688$, $p = 0.008$. The *p*-value, $p = 0.008$, was statistically significant; therefore, the null hypothesis was rejected. The effect size was considered small, Cohen's $d = 0.299$. Table 6 provides the results of the Independent Samples *t*-Test.

Table 6

Utah Versus Tennessee t Test for Perception of Support and Conditions

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	2.688	385	0.008	0.482	0.179	0.129	0.835

Note. *t* = *t*-test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q1c: Utah versus Tennessee: Perceptions of safety. There were 115 Utah participants and 271 Tennessee participants. An independent samples *t* test was run to determine if there were significant differences in perceptions of safety between employees who worked in public academic institutions in the states of Utah and Tennessee. There were no outliers in the data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, $p = 0.614$. Employees who worked at public academic institutions in Utah perceived feeling safer, $M = 34.99$, $SD = 7.922$, than employees who worked at public academic institutions in Tennessee, $M = 30.29$, $SD = 7.339$, a statistically significant difference, $M = 4.702$, 95% *CI* [3.059, 6.345], $t(386) = 5.627$, $p < 0.001$. The *p*-value, $p < 0.001$, was statistically significant; therefore, the null hypothesis was rejected. The effect size was considered medium, Cohen's $d = 0.626$. Table 7 provides the results of the Independent Samples *t*-Test.

Table 7

Utah Versus Tennessee t Test for Perception of Safety

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	5.627	386	< 0.001	4.702	0.836	0.403	0.847

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q2a: Rural versus urban: Perceptions of victimization. There were 141 participants who worked at rural academic institutions and 243 participants who worked at urban academic institutions. An independent samples *t* test was run to determine if there were significant differences in perceptions of victimization between employees who worked in rural academic institutions and urban academic institutions. There were no outliers in the rural data and three outliers in the urban data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample t test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, p = 0.327. Employees who worked at rural academic institutions perceived feeling less victimized, M = 13.40, SD = 2.019, than employees who worked at urban academic institutions, M = 12.63, SD = 2.237, a statistically significant difference, M = 0.777, 95% CI [0.331, 1.224], $t(385) = 3.424$, $p < 0.001$. The p-value, $p < 0.001$, was statistically significant, therefore, the null hypothesis was rejected. The effect size was considered small, Cohen's d=0.4. Table 8 provides the results of the Independent Samples *t*-Test.

Table 8

Rural Versus Urban t Test for Perception of Victimization

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	3.424	385	0.001	0.777	0.227	0.331	1.224

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q2b: Rural versus urban: Perceptions of support and conditions. There were 141 participants who worked at rural academic institutions and 243 participants who worked at urban academic institutions. An independent samples *t* test was run to determine if there were significant differences in perceptions of support and conditions between employees who worked in rural academic institutions and urban academic institutions. There were no outliers in the rural data and two outliers in the urban data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, $p = 0.399$. Employees who work at rural academic institutions perceived higher support and conditions, $M = 10.11$, $SD = 1.526$, than employees who work at urban academic institutions, $M = 9.58$, $SD = 1.645$, a statistically significant difference, $M = 0.532$, 95% CI [0.200, 0.865], $t(383) = 3.146$, $p < 0.001$. The *p*-value, $p < 0.001$, was statistically significant; therefore, the null hypothesis was rejected. The effect size was considered small, Cohen's $d = 0.332$. Table 9 provides the results of the Independent Samples *t*-Test.

Table 9

Rural Versus Urban t Test for Perception of Support and Conditions

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	3.146	383	0.001	0.532	0.169	0.200	0.865

Note. *t*= *t* Test; *df*= Degrees of Freedom; *M*= Mean Difference; *SE*= Standard Error Difference; Lower and Upper= 95% Confidence Interval of the difference.

Q2c: Rural versus urban: Perceptions of safety. There were 141 participants who worked at rural academic institutions and 243 participants who worked at urban academic institutions. An independent samples *t* test was run to determine if there were significant differences in perceptions of safety between employees who worked in rural academic institutions and urban academic institutions. There were no outliers in the data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample t test was robust against non-normal distributions. The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances, $p = 0.018$. Employees who worked at rural academic institutions indicated higher perception of safety, $M = 33.07$, $SD = 7.141$, than employees who worked at urban academic institutions, M = 30.85, $SD = 8.051$, a statistically significant difference, $M = 2.218$, 95% *CI* [0.665, 3.771], $t(326.632) = 2.809$, $p = 0.005$. The *p*-value, $p = 0.005$, was statistically significant; therefore, the null hypothesis was rejected. The effect size was considered small, Cohen's $d = 0.287$. Table 10 provides the results of the Independent Samples *t*-Test.

Table 10

Rural Versus Urban t Test for Perception of Safety

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	2.809	326.632	0.005	2.218	0.790	0.665	3.771

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q3a: Large versus medium: Perceptions of victimization. There were 191 participants that worked at a large academic institution (more than 5,000 students attended) and 193 participants that worked at a medium academic institution (2,000-4,999 students attended). An independent samples *t* test was run to determine if there were significant differences in perceptions of victimization between employees who worked at large academic institutions and employees who worked at medium academic institutions. There were two outliers in the large academic institutions data and there were two outliers in the medium institutions data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, $p = 0.117$. Employees who worked at large academic institutions perceived feeling less victimized, M = 13.18, $SD = 2.119$, than employees who worked at medium academic institutions, $M = 12.67$, $SD = 2.246$, a statistically significant difference, $M = 0.504$, 95% *CI* [0.068, 0.940], $t(386) = 2.275$, $p = 0.023$. The *p*-value, $p = 0.023$, was statistically significant; therefore, the null hypothesis was rejected. The effect size was considered small, Cohen's $d = 0.231$. Table 11 provides the results of the Independent Samples *t*-Test.

Table 11

Large Versus Medium t Test for Perception of Victimization

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	2.275	386	0.023	0.504	0.222	0.068	0.940

Note. *t*= *t* test; *df*= Degrees of Freedom; *M*= Mean Difference; *SE*= Standard Error Difference; Lower and Upper= 95% Confidence Interval of the difference.

Q3b: Large versus medium: Perceptions of support and conditions. There were 191 participants who worked at a large academic institution (more than 5,000 students attended) and 193 participants who worked at a medium academic institution (2,000-4,999 students attended). An independent samples *t* test was run to determine if there were significant differences in perceptions of support and conditions between employees who worked at large academic institutions and employees who worked at medium academic institutions. There was one outlier in the large academic institution and one outlier in the medium academic institution, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, $p = 0.830$. Employees who worked at large academic institutions perceived higher support and conditions of concealed carry, $M = 9.81$, $SD = 1.617$, than employees who worked at medium academic institutions, $M = 9.75$, $SD = 1.637$, a non-statistically significant difference, $M = 0.059$, 95% *CI* [-0.267, 0.384], $t(385) = 0.355$, $p = 0.723$. The *p*-value, $p = 0.723$, was not statistically significant; therefore, the researcher failed to reject the null hypothesis. Table 12 provides the results of the Independent Samples *t*-Test.

Table 12

Large Versus Medium t Test for Perception of Support and Conditions

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	0.355	385	0.723	0.059	0.165	-0.267	0.384

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q3c: Large versus medium: Perceptions of safety. There were 191 participants who worked at a large academic institution (more than 5,000 students attended) and 193 participants who worked at a medium academic institution (2,000-4,999 students attended). An independent samples *t* test was run to determine if there were significant differences in perceptions of safety between employees who worked at large academic institutions and employees who worked at medium academic institutions. There were no outliers in the data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, $p = 0.277$. Employees who worked at large academic institutions indicated higher perception of safety, $M = 31.74$, $SD = 8.083$, than employees who worked at medium academic institutions, $M = 31.65$, $SD = 7.560$, a non-statistically significant difference, $M = 0\ .091$, 95% *CI* [-1.473, 1.656], $t(385) = 0.115$, $p = 0.909$. The *p*-value, $p = 0.909$, was not statistically significant; therefore, the researcher failed to reject the null hypothesis. Table 13 provides the results of the Independent Samples *t*-Test.

Table 13

Large Versus Medium t Test for Perception of Safety

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	0.115	385	0.909	0.091	0.796	-1.473	1.656

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q4a: Part-time versus full-time: Perceptions of victimization. There were 327 full-time participants and 57 part-time participants. An independent samples *t* test was run to determine if there were significant differences in perceptions of victimization between full-time and part-time employees. There were three outliers in the full-time data and no outliers in the part-time data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, $p = 0.174$. Part-time employees perceived feeling less victimized, $M = 13.90$, $SD = 1.880$, than full-time employees, $M = 12.75$, $SD = 2.202$, a statistically significant difference, $M = -1.144$, 95% *CI* [-1.748,-0.541], $t(387) = -3.726$, $p < 0.001$. The *p*-value, $p < 0.001$, was statistically significant; therefore, the null hypothesis was rejected. The effect size was considered medium, Cohen's $d = 0.530$. Table 14 provides the results of the Independent Samples *t*-Test.

Table 14

Part-Time Versus Full-Time t Test for Perception of Victimization

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	-3.726	387	< 0.001	1.144	0.307	-1.748	-0.541

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q4b: Part-time versus full-time: Perceptions of support and conditions.

There were 327 full-time participants and 57 part-time participants. An independent samples *t* test was run to determine if there were significant differences in perceptions of support and conditions between full-time and part-time employees. There were two outliers in the full-time data and no outliers in the part-time data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. The assumption of homogeneity of variances was violated, as assessed by Levene's test for equality of variances, $p = 0.001$. Part-time employees perceived higher support and conditions, $M = 9.98$, $SD = 1.132$, than full-time employees, $M = 9.75$, $SD = 1.697$, a non-statistically significant difference, $M = 0.235$, 95% *CI* [-0.583, 0.113], $t(108.176) = -1.339$, $p = 0.183$. The *p*-value, $p = 0.183$, was not statistically significant; therefore, the researcher failed to reject the null hypothesis. Table 15 provides the results of the Independent Samples *t*-Test.

Table 15

Part-Time Versus Full-Time t Test for Perception of Support and Conditions

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	-1.339	108.176	0.183	0.235	0.176	-0.583	0.113

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Q4c: Part-time versus full-time: Perceptions of safety. There were 327 full-time participants and 57 part-time participants. An independent samples *t* test was run to determine if there were significant differences in perceptions of safety between full-time and part-time employees. There were no outliers in the full-time data and no outliers in the part-time data, as assessed by inspection of a boxplot. The scores were not normally distributed, but testing proceeded because the independent sample *t* test was robust against non-normal distributions. There was homogeneity of variances, as assessed by Levene's test for equality of variances, $p = 0.513$. Part-time employees perceived feeling safer, $M = 32.74$, $SD = 8.271$, than full-time employees, $M = 31.50$, $SD = 7.725$, a non-statistically significant difference, $M = -1.235$, 95% *CI* [-3.436, -0.966], $t(386) = -1.104$, $p = 0.270$. The *p*-value, $p = 0.270$, was not statistically significant; therefore, the researcher failed to reject the null hypothesis. Table 16 provides the results of the Independent Samples *t*-Test.

Table 16

Part-Time Versus Full-Time t Test for Perception of Safety

t-Test Factors	*t*	*df*	*p*-value	*M*	*SE*	Lower	Upper
Value	-1.104	386	0.270	-1.235	1.119	-3.436	0.966

Note. *t* = *t* Test; *df* = Degrees of Freedom; *M* = Mean Difference; *SE* = Standard Error Difference; Lower and Upper = 95% Confidence Interval of the difference.

Summary

The perception of safety is the threat-appraisal process of the protection motivation theory and the decision to allow concealed carry on the campus is the coping-appraisal process of the possibility of a school shooter (Rogers, 1975). Thus, an individual may cognitively feel safer carrying a concealed gun. Lazarus (1966) argued how we perceive events in life has direct psychological effects and mental events have biological outcomes. Research shows the perception of safety is affected by individuals' prior experiences, their environment, and resources available to them. The findings of this study show that perception of safety is higher on campuses that allow anyone with a concealed carry license to CCOC. This study sought to determine the differences in perceptions of safety between employees who worked at public academic institutions in the states of Utah and Tennessee. Utah allowed any individual that had a concealed carry permit to carry on campus (Schildkraut, Carr, & Terranova, 2018). Tennessee only allowed employees with a concealed carry permit to carry on campus (Bishop, 2019). Employees who worked in Utah perceived feeling less victimized, had higher support and conditions for CCOC, and perceived feeling safer. Employees who worked in rural area academic institutions perceived feeling less victimized, had higher support and conditions for CCOC, and perceived feeling safer. Employees who worked at large academic institutions perceived feeling less victimized, had higher support and conditions for CCOC, and perceived feeling safer. Part-time employees perceived feeling less victimized, had higher support and conditions for CCOC, and perceived feeling safer.

In Chapter Five, the researcher gave a detailed interpretation of the results, a synthesis of the research findings, and recommendations for future research.

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

Introduction

The Columbine High School massacre (Schildkraut & Hernandez, 2014), Virginia Tech College shooting (Nedzel, 2014; Wofford, 2017), and Sandy Hook Elementary School shooting (Greenberg, 2019) are three events that brought new awareness of safety concerns to academic institutions. Due to these school shootings, employees' perceptions of safety on college campuses may have been altered. The purpose of this causal-comparative study was to test the theory of protection and the cognitive appraisal theory by comparing perceptions of safety of employees who worked at public colleges in the states of Tennessee and Utah. Tennessee only allowed employees with a concealed carry permit to conceal carry versus public colleges in the state of Utah that allowed anyone with a concealed carry permit to conceal carry on campus (Bishop, 2019). Participants selected for the study were employees who worked at public academic institutions in the states of Tennessee and Utah. Permission was granted to send a survey to participants to identify their perception of safety pertaining to conceal carry on their academic institution's campus. To understand employees' perceptions of safety, two theoretical frameworks, cognitive appraisal theory and protection motivation theory, were used to explain how perceptions are formed. Cognitive appraisal theory explains why an individual feels unsafe (Lazarus, 1966). Protection motivation theory depicts how individuals respond in an unsafe situation (Rogers, 1975). There has been significant research studying the perceptions of students, but little on the perceptions of employees (Bishop, 2019; Hassett et al., 2020; Schildkraut, Carr, & Terranova, 2018).

Summary of Findings

This research was focused on employee perceptions of safety between public academic institutions in Utah and Tennessee. The researcher looked specifically at three components: perception of safety, perception of victimization, and support and conditions of CCOC. Using the results from the independent samples *t* test, the standardized effect size was calculated using Cohen's *d* formula. A small effect size is smaller than medium but not so small as to be trivial, whereas large effect size means the findings have practical significance. The data showed the most considerable piece of data was the perceptions of victimization between employees who worked in Utah versus Tennessee, which had a large effect size, and the perceptions of safety, which had a medium effect size. Part-time employee versus full-time employee perception of victimization had a medium effect size. All other statistically significant findings had small effect sizes or were not statistically significant. Cognitive appraisal theory (Lazarus, 1966) explains why an individual feels unsafe and protection motivation theory (Rogers, 1975) depicts how individuals respond in an unsafe situation.

The year of the study offered challenges created by the COVID-19 pandemic. Some employees were feeling survey fatigue and some schools were working remotely. Insights from the participants were informative and provided perceptions of safety from the employees' perspective for other academic institutions to consider when creating safety plans that include a policy on concealed carry while on campus. Table 17 shows which research questions were rejected and which research questions were failed to be rejected.

Table 17

Research Questions That Were Rejected or Failed to be Rejected

Research Question	Rejected	Failed to be Rejected
Q1a	X	
Q1b	X	
Q1c	X	
Q2a	X	
Q2b	X	
Q2c	X	
Q3a	X	
Q3b		X
Q3c		X
Q4a	X	
Q4b		X
Q4c		X

Research Question 1 findings: Utah versus Tennessee. This question sought to determine whether there was a difference between employees who worked in Utah compared to Tennessee on the three components of perception of safety. Independent samples *t* tests were run and statistically significant differences were found for each of the three components. Victimization had a large effect size, perception of safety had a medium effect size, and support and conditions had a small effect size. Since victimization had the largest effect size, that data would be most helpful for academic institutions to analyze. The medium effect size of perception of safety is important to address as well. However, the perception of support and condition had a small effect size, indicating that the perception of support and condition is not a focal point for the participants' perceptions of safety. The protection motivation theory recognizes

individuals feel motivated to protect themselves rather than feeling the emotion of fear (Rogers, 1975). According to the theory, an individual's coping mechanism for a potential active shooter is to carry a concealed gun. This study's data indicated individuals feel safer when everyone has the ability to carry a concealed weapon. Thus, individuals feel safer on a campus that allows concealed carry, and when one has calculated a threat to their safety may be high, then they may use the concealed gun as their coping mechanism to prevent themselves from being harmed.

Research Question 2 findings: Rural versus urban. This question sought to determine whether there was a difference between employees who worked at rural academic institutions compared to urban academic institutions on the three components of perception of safety. Independent samples *t* tests were run and statistically significant differences were found for each of the three components. All three components had a small effect size, indicating that differences in perceptions of safety between rural and urban campuses are limited and not the most useful indicator of an employee's perception of safety. Self-efficacy, as previously identified in the protection motivation theory, is an individual's belief that their behavior could reduce a threat of harm (Rogers, 1975). A campus may allow concealed carry, but it is the employees' decision to carry and use the weapon in response to a threat that supports the self-efficacy part of the protection motivation theory. An employee who carries a concealed gun on campus believes with the use of their weapon they can reduce the threat of harm occurring to them (Hsiao, 2018; Shepperd et al., 2018).

Research Question 3 findings: Large versus medium. This question sought to determine whether there was a difference between employees who worked at large

academic institutions (more than 5,000 students attended) and employees who worked at medium academic institutions (2,000-4,999 students attended) on the three components of perception of safety. Independent samples *t* tests were run and statistically significant differences were found for violence and victimization on campus with a small effect size. A statistically significant difference was not found for support and conditions of CCOC or for perception of safety. The size of a campus does not seem to affect the perception of safety. The data from this study indicated employees felt less victimized on a larger campus, which contradicts previous studies (Sandersen et al., 2018). However, larger campuses have more money to implement more safety measures, such as blue-light phones, more security guards, and cameras, which may increase an employee's perception of safety and decrease their feeling of being a victim. Comparing large to medium campuses was the one research question that provided the least amount of significant data. The only significant data provided from the comparison of the size of the campuses was the difference for the perceptions of victimization, which aligns with the cognitive appraisal theory regarding resources an employee has to protect themselves. The more resources a campus has as part of their safety plan the more protected and safer an individual feels. The data supported the most noteworthy concept for an employee's perception of safety was who was able to carry a concealed gun. Allowing individuals to legally be able to carry concealed guns addresses the secondary appraisal process of the cognitive appraisal theory because the individual now has a resource to protect themself (Lazarus, 1966).

Research Question 4 findings: Part-time versus full-time. This question sought to determine whether there was a difference between employees who worked part-

time compared to full-time on the three components of perception of safety. Independent samples t tests were run and statistically significant differences were found for violence and victimization on campus with a medium effect size. Since the data had a medium effect size, this indicates that the data were worth investigating. Part-time employees felt less victimized, which is not surprising due to the fact they were on campus for a limited time compared to full-time employees. There was not a statistically significant difference for support and conditions of CCOC or for perception of safety. Comparing part-time to full-time employees was the second area that provided only one piece of significant data, indicating that comparing part-time employees to full-time employees was not as beneficial. According to the cognitive appraisal theory and protection motivation theory, it is a combination of prior experiences and the resources one has to protect oneself in their current environment (Lazarus, 1966; Rogers, 1975). In this scenario, the individual's environment includes how much time they are on the campus and who is able to carry a concealed gun on campus. Part-time employees spent less time on campus and perceived feeling less victimized.

Conclusions

Campuses must examine their resources and safety options to prepare for the protection of their employees and students during possible instances of an active shooter on campus (Hsiao, 2018). In 2012, The state of Colorado allowed CCOC based on the Concealed Handgun Carry Act that was enacted in 2003 (Sandersen et al., 2018). The decision to allow individuals to carry a concealed weapon on campus is one of the recent safety options academic institutions have been forced to address (Shepperd et al., 2018). For some individuals, CCOC makes them feel safer; however, for other individuals,

CCOC makes them fear being a victim every time they walk on campus (DeMitchell & Rath, 2019). Perception of safety is affected by an individual's fear of being a victim. The cognitive appraisal theory explains that an individual's past victimization experiences impact the safety perception of the likelihood of being a victim again (Hignite et al., 2018; Lazarus, 1966). Some individuals associate safety with carrying a weapon to defend themselves and therefore might possibly be more likely to work at a campus that allows CCOC as part of that campus's safety procedures. This study's data showed the strongest indicator of perception of safety was related to who was able to CCOC: in Utah everyone with a concealed carry license is allowed to CCOC versus in Tennessee where only employees with license are allowed to CCOC. The findings of this study show that employees have a higher perception of safety on campuses that allow everyone to CCOC. The size of the campus and whether the employee was part-time or full-time had the least amount of significance to the employees' perceptions of safety.

Examining the initial limitations proposed, the researcher identified limitations that may have affected the data. The boxplot data showed a few outliers, which may have been due to bias of a participant with a strong pro or anti concealed carry position. The number of returns was a limitation for part-time participants and participants who worked at Utah public academic institutions. Predominantly, the race of participants was White, which did not provide diversity. The majority of participants were female, which statistically are not pro on concealed carry policies.

The findings of this study mean that employees have a higher perception of safety on campuses that allow everyone to CCOC. If an academic institution does not allow or only allows employees to CCOC, they should reevaluate their safety policies to possibly

include the ability for anyone with a license to CCOC. These findings could lead to a study examining perception of safety by comparing public academic institutions that do not allow any weapons to be concealed on campus to academic institutions that allow CCOC. According to the protection motivation theory (Rogers, 1975) an individual has to feel unsafe to be motivated to protect themselves, in this study, with a concealed weapon. It would be of value to examine how employee perception of safety and CCOC policies differ at academic institutions that have experienced a shooting. Based on the cognitive appraisal theory (Lazarus, 1966), prior experiences influence an individual's perception of safety.

Perceptions of campus violence and victimization. Employees who work at public academic institutions in Utah perceived feeling less victimized. This data aligned with previous research of how some individuals associate safety with carrying a weapon to defend themselves and therefore might possibly be more likely to work at a campus that allows CCOC as part of that campus's safety procedures (Somers & Phelps, 2018). The findings of this study support the concept that CCOC may be viewed as a positive force in individuals' perceptions of safety.

Utah campuses allow anyone with a concealed carry license to carry a concealed gun and the data showed employees perceived feeling less victimized. The literature suggested that it may be due to a possible shooter knowing they are not the only individual who has a gun (McQuiller, 2019). The NRA's then Executive Vice President Wayne LaPierre explained that the GFSZA signs announce to the public that schools are the safest place for a shooter to commit a crime with the highest casualties. Because of the signage, the shooter knows no one else besides a few identifiable police have a

weapon to defend themselves (McQuiller, 2019). However, if the campus has a concealed carry sign this could be a possible deterrent to an active shooter. According to the protection motivation theory an individual may respond to their fear of being a victim by working on a campus where concealed carry is permitted.

Employees who work at rural academic institutions perceived feeling less victimized. Prior studies support that concealed carry permits are sold more in rural areas that have a culture of hunting (Schildkraut, Carr, & Terranova, 2018; Turchan et al., 2017). The data also indicated that part-time employees perceived feeling less victimized. Since part-time employees are on the academic institution for a shorter time, that may be the reason why these employees perceive feeling less victimized; however, this is speculation and not a finding of this research.

Employees who worked at large academic institutions perceived feeling less victimized. This piece of data was not anticipated, because previous research found that campus police are only able to protect a small portion of campus considering the large areas involved (Hsiao, 2018). Since campuses have multiple entrances, they are harder to secure from an intruder. Identifying intruders is easier in a small school due to limited entrances and school uniforms; however, on an open campus with a large number of students in plain clothing, it is difficult to identify who is an intruder (King & Bracy, 2019). On a campus the local police are called after an incident is reported and the individuals that are carrying a concealed weapon on campuses could protect themselves and do not have to rely on police officers to arrive (Hsiao, 2018). The size of the campus had a significant difference for the perception of victimization, which aligns with the cognitive appraisal theory on resources an employee has to protect themselves. The more

resources a campus has as part of their safety plan, the more protected and safer an individual feels. The data showed the greatest indicator for an employee's perception of safety was who was able to carry a concealed gun. The protection motivation theory identifies four factors associated with the concept of fear appeals, which examines an individual's perceived severity of threat, their vulnerability, tools they have to handle the situation, and perceived self-efficacy (Rogers, 1975). The option for employees to carry a concealed gun on campus would be part of the tools portion of the protection motivation theory to handle a situation.

Support and conditions of CCOC. Employees who work at public academic institutions in Utah perceived higher support and conditions. This result is not surprising since Utah academic institutions allow anyone to carry a concealed gun if they have a concealed carry license compared to Tennessee academic institutions that only allow employees the option to carry a concealed gun if they have a concealed carry license. Proponents of concealed carry believe that students who have a concealed carry license and carry a concealed gun on the campus are an extra source of protection (Hsiao, 2018; Minshew, 2018; Wofford, 2017). On the contrary, opponents of CCOC see the ability for students to CCOC as actually making the campus less safe (Hsiao, 2018; Minshew, 2018; Wofford, 2017). The researcher expected the data to show that Utah perceived higher support and conditions of CCOC because the state allowed for anyone who had a concealed carry license to carry a concealed gun.

Employees who work at rural academic institutions perceived higher support and conditions. This finding supported prior studies, which noted that concealed carry permits are sold more in rural areas that have a culture of hunting (Schildkraut, Carr, &

Terranova, 2018; Turchan et al., 2017). McLean and Sorens (2019) stated that rural areas lean towards the Republican Party, which is typically pro CCOC and conversely urban areas lean more toward the Democratic Party, which is typically anti CCOC. Another idea supporting previous studies was how participants who work on rural campuses perceived more support and conditions of concealed carry policies, which prior studies connected to their upbringing around guns (Schildkraut, Carr, & Terranova, 2018; Turchan et al., 2017; Woldoff et al., 2017).

On an open campus with large number of students in plain clothing, it is difficult to identify who is an intruder (King & Bracy, 2019). Campus police are only able to protect a small portion of campus considering the large areas involved (Hsiao, 2018). Employees who worked at large academic institutions perceived higher support and conditions of concealed carry. Since campuses have multiple entrances, they are harder to secure from an intruder. Individuals that are carrying a concealed weapon on campuses could protect themselves and do not have to rely on police officers to arrive. Carrying a concealed weapon is a mechanism supported by the concepts presented in cognitive appraisal theory (Lazarus, 1966).

Individuals now have the resource of a concealed carry weapon available to utilize in a mass shooting situation (Jiang, 2017; Lazarus, 1966). Applying the protection motivation theory to this study, individuals felt safer on a campus where they have the ability to CCOC. Participants may have purposely chosen to work on a campus where they had the ability to CCOC, as the individual could use the concealed weapon as a coping process to decrease the odds of being harmed.

Perceptions of safety. Lazarus (1966) stated in the cognitive appraisal theory that in order for an individual to feel stress he or she must have a perception that there is an imbalance in the demand of a behavior and the ability for the individual to deal with the demand (Jiang, 2017; Lazarus, 1966). Carrying a concealed weapon is a mechanism supported by the concepts presented in cognitive appraisal theory (Lazarus, 1966). The protection motivation theory explains how the academic institution's environment affects an individual's perception of safety. Self-efficacy is the aspect most relative to the protection motivation theory for this study. A campus may allow concealed carry, but it is the employees' decision to carry and use the weapon in response to a threat, which is the self-efficacy part of the protection motivation theory.

If an academic institution has signage that displays that the academic institution does not allow guns on campus, the shooter presumes no one else besides a few identifiable police have a weapon to defend themselves (McQuiller, 2019). However, if the campus has a concealed carry sign this is a possible deterrent to an active shooter, possibly making employees increase their perception of safety (McQuiller, 2019). Proponents of concealed carry believe that students who have a concealed carry license and carry a concealed gun on the campus are an extra source of protection. On the contrary, opponents of CCOC see the ability for students to CCOC would decrease campus safety. Some individuals associate a higher perception of safety with carrying a weapon to defend themselves and therefore might possibly be more likely to work at a campus that allows CCOC as part of that campus's safety procedures. Previously reviewed literature supported that concealed carry permits are sold more in rural areas that have a culture of hunting (Schildkraut, Carr, & Terranova, 2018; Turchan et al.,

2017). This aligns to the data that indicated employees who work at rural academic institutions had a higher perception of safety.

Implications

Previous research focused on students, not employees. This study analyzed employee safety perceptions on campuses that allowed individuals with a concealed carry license to carry a concealed gun with certain policy guidelines. Prior studies support that concealed carry permits are sold more in rural areas that have a culture of hunting (Schildkraut, Carr, & Terranova, 2018; Turchan et al., 2017). In this study participants who worked on rural campuses perceived feeling safer compared to participants who worked on urban campuses**.** Additionally, previous studies noted participants who work on rural campuses perceived more support and conditions of concealed carry policies, which prior studies connected to their upbringing around guns (Schildkraut, Carr, & Terranova, 2018; Turchan et al., 2017; Woldoff et al., 2017).

The most notable key finding in this study was the degree to which the perception of safety was affected by who was allowed to CCOC. The data implied that participants perceived feeling less victimized on academic institutions that allowed anyone with a concealed carry license to CCOC. Participants who worked on large academic institutions perceived feeling less victimized, which was a surprising finding, based on the literature review that noted that campus police are only able to protect a small portion of campus considering the large areas involved (Hsiao, 2018). The researcher believes that larger academic institutions have more resources on campus as part of their safety plan, which could help individuals feel more protected and safer.

In conjunction with perception of violence and victimization on campus, participants who worked on campuses that allowed anyone with a concealed carry license the CCOC option showed more support and conditions of concealed carry policies. The literature review provided a possible explanation: Americans who own guns view gun restrictions as a threat to their safety and feel safer if they are armed (Shepperd et al., 2018). The protection motivation theory depicts individuals feeling motivated to protect themselves over feeling fear. An employee who carries a concealed weapon on campus believes with the use of their weapon they can reduce the threat of harm occurring to them (Hsiao, 2018; Shepperd et al., 2018). The results imply that rural areas perceive higher support and conditions of CCOC; McLean and Sorens (2019) stated that rural areas lean towards the Republican Party, which typically is pro CCOC. Employees who work part-time perceived feeling safer, implying the more time an individual is on campus the less safe they feel.

The perception of safety was highest when an individual had the ability to CCOC and in rural areas. If an academic institution is looking to include CCOC they would have more support if they were in a rural area and if their state already legally allows individuals to carry a concealed weapon in public areas. The size of the academic institution and whether the employees are part-time or full-time had little effect on perception of safety. Academic institutions should examine their surrounding area, noting that if they are in a rural area, they will most likely have a higher percentage of employees supporting those on campus with a concealed carry license to be granted the ability to CCOC. Then examine whether their state legally allows individuals to conceal

carry in public; if the state allows concealed carry, then the academic institution will have higher support of allowing anyone to CCOC.

Examining the initial limitations proposed, the researcher identified limitations that may have affected the data. The boxplot data showed a few outliers, which may have been due to bias of a participant with a strong pro or anti concealed carry position. The number of returns was a limitation for part-time participants and participants who worked at Utah public academic institutions. Predominantly, the race of participants was White, which did not provide diversity. The majority of participants were female, which statistically are not pro on concealed carry policies. Each *t* test noted there was no variance in any group.

The findings of this study mean that employees have a higher perception of safety on campuses that allow everyone to CCOC. If an academic institution does not allow or only allows employees to CCOC, they should reevaluate their safety policies to possibly include the ability for anyone with a license to CCOC. Academic institutions could use this data as an opportunity to assess their safety policy and further evaluate employees for their input on possibly adding a concealed carry policy, which allows anyone with a concealed carry license the ability to CCOC. To ensure that academic institutions have the data of this study, the researcher sent the results of the study to every academic institution that participated; therefore, each of those academic institutions could reflect on the data and adjust their safety policies accordingly. The conclusions of the study are valuable, because if an academic institution adjusts its safety policy to include the ability for anyone to CCOC, the change could improve employee's perception of safety on their campus.

Understanding how previous campus shootings and the possibility of future shootings affect employees' perceptions of safety on campus is critical to promoting effective campus safety policies. Carrying a concealed weapon is a mechanism supported by the concepts presented in cognitive appraisal theory (Lazarus, 1966). The protection motivation theory explains how the academic institution's environment affects an individual's perception of safety. Self-efficacy is the aspect most relevant to the protection motivation theory for this study, noting individuals feel safer when they have the ability to CCOC. A campus may allow concealed carry, but it is the employees' decision to carry and use the weapon in response to a threat that is the self-efficacy part of the protection motivation theory. As a result, academic institutions should be aware that employees perceived feeling safer on a campus that allowed everyone with a concealed carry license to carry a concealed gun. When determining a safety plan an academic institution should look at their location, specifically rural, and who will be able to carry a concealed weapon on campus.

Recommendations for Future Research

The study provided data that found a statistically significant difference of perceptions of safety, victimization, and support and conditions of concealed carry between academic institutions that allowed only employees with a concealed carry license the right to carry a concealed gun and academic institutions that allowed anyone with a concealed carry license to carry a concealed gun. Future research should examine why there was a difference in perceptions of safety between academic institutions that only allowed employees to conceal carry and academic institutions that allowed anyone with a concealed carry license to CCOC. This research could be accomplished through a

mixed method approach where a researcher deploys the survey used in this study to all employees and additionally interviews randomly selected employees on why they feel safe or do not feel safe. The survey should include questions about what safety policies would make them feel safer while on campus. Adding an open-ended question would help determine why employees' perceptions of safety are different between the two types of academic institutions. With the data collected about what would make employees feel safer, if that would be adding a policy including a concealed carry policy or not allowing CCOC, academic institutions could adjust their safety policies accordingly.

Another recommendation would be to compare public academic institutions that do not allow any weapons to be concealed on campus to academic institutions that have a concealed carry policy that allow individuals to carry a concealed gun while on campus. According to the protection motivation theory (Rogers, 1975), an individual must feel unsafe to be motivated to protect themselves, in this study, with a concealed weapon. Some individuals feel safer with the option to CCOC, while others feel less safe with allowing weapons on campus, which could affect an individual's motivation to protect themselves. This would determine a clear difference in policy, compared to this study in which both allowed concealed carry, but the difference was who was allowed to CCOC. If academic institutions that do not allow CCOC at all felt safer, then that could be relevant data to academic institutions indicating that in retrospect adding a concealed carry policy in hopes of improving the perception of safety is actually having adverse effects. If employees at academic institutions that do not allow CCOC at all perceived feeling less safe compared to academic institutions who allow CCOC, then that data

would be helpful for academic institutions to take into consideration, that including a concealed carry policy may improve the perception of safety on their campus.

In addition, it would be of value to examine how employee perception of safety and CCOC policies differ at academic institutions that have experienced a shooting. Based on the cognitive appraisal theory (Lazarus, 1966), prior experiences influence an individual's perception of safety. In the literature review the researcher wrote how academic institutions have tried to improve their safety policies after each shooting. Future research should look at how safety policies have changed at academic institutions that have experienced a mass shooting and examine if they included a policy on concealed carry since the mass shooting on their campus.

The literature review provided prior research on how teachers felt their teaching environment was affected due to the possibility their students could have a concealed weapon on them (DeMitchell & Rath, 2019; Soboroff et al., 2019). Another area of interest to examine would be if teachers' perceptions of safety are affected when an academic institution does allow CCOC, which could possibly affect the classroom environment. The cognitive appraisal theory (Lazarus, 1966) states that an individual's environment has a direct effect on their perception of safety. A researcher could send the survey used in this study to all teachers, to both academic institutions that allow only employees to CCOC and to academic institutions that allow anyone including students to CCOC with a license, to identify if there is a difference in perceptions of safety. Then if the data provided evidence that there is a difference, further research could examine why the perception of safety is affected.

Conclusions

The purpose of this causal-comparative study was to test the theory of protection and the cognitive appraisal theory that compared perceptions of safety of employees who worked at public colleges in the state of Tennessee that only allowed employees with a concealed carry permit to conceal carry versus public colleges in the state of Utah that allowed anyone with a concealed carry permit to CCOC. The research addressed a gap in literature about employee perceptions of safety. There have been studies about student perceptions of safety on campus (Merianos et al., 2017; Schafer et al., 2018; Thompson, Price, Dake, Teeple, Bassler, et al., 2013); however, there has been very little research on employees' perceptions of safety on campus and specifically related to concealed carry.

The results of this research indicated that participants perceived feeling safer and less victimized on academic institutions in Utah, which allowed anyone with a concealed carry license to CCOC. This finding is supported by prior research that concluded an employee who carries a concealed weapon on campus believes with the use of their weapon they can reduce the threat of harm occurring to them (Hsiao, 2018; Shepperd et al., 2018). In this study participants who worked on rural campuses perceived feeling safer than participants who worked on urban campuses**.** The size of the academic institution and the participant's employment status, part-time versus full-time, had little effect on their perception of safety.

Cognitive appraisal theory explains why an individual feels unsafe and protection motivation theory depicts how individuals respond in an unsafe situation (Lazarus, 1966; Rogers, 1975). The size of the campus had a significant difference for the perceptions of victimization, which aligns with the cognitive appraisal theory on resources an employee

has to protect themselves. The more resources a campus has as part of their safety plan, the more protected and safer an individual feels. The data showed the best indicator of an employee's perception of safety was who was able to carry a concealed gun. Allowing individuals to legally be able to carry concealed guns addresses the secondary appraisal process of the cognitive appraisal theory (Lazarus, 1966). Carrying a concealed weapon is a mechanism supported by the concepts presented in cognitive appraisal theory (Lazarus, 1966). Individuals now have the resource of a concealed carry weapon available to utilize in a mass shooting situation (Jiang, 2017; Lazarus, 1966). Applying the protection motivation theory to this study, individuals felt safer on a campus where they had the ability to CCOC. Participants may have purposely chosen to work on a campus where they had the ability to CCOC as the individual would be able to use the concealed weapon as a coping process to decrease the odds of being harmed.

As a result of this study, additional research should be conducted on why there is a difference of perceptions of safety between academic institutions that allow only employees to carry a concealed gun on campus versus academic institutions that allow anyone with a concealed carry license to carry a concealed gun on campus. Additionally, future research examining how employee perception of safety and CCOC policies may have changed on academic institutions that have had a school shooting would be recommended.

REFERENCES

Angered by teacher, boy shoots girl. (1920, March 4). Bismarck Daily Tribune. Image 8. Retrieved from https://chroniclingamerica.loc.gov/lccn/sn85042243/1920-03-04/ed-1/seq-8/

Arrigo, B. A., & Acheson, A. (2016). Concealed carry bans and the American college campus: A law, social sciences, and policy perspective. *Contemporary Justice Review, 19*(1), 120–141. doi:10.1080/10282580.2015.1101688

Atlas, P. M. (2019). Of peaceable kingdoms and lawless frontiers: Exploring the relationship between history, mythology and gun culture in the North American West. *American Review of Canadian Studies, 49*(1), 25–49. doi:10.1080/02722011.2019.1573843

Bishop, A. (2019). *Shootings, strain, and safety on a college campus: An analysis of perceptions of safety and concealed carry* (Master's thesis). Retrieved from https://dc.etsu.edu/etd/3525

Brady. (2019). History of Brady. Retrieved from https://www.bradyunited.org/history

Brady Handgun Violence Prevention Act, H.R. 1025 - 103rd Congress (1993). Retrieved from https://www.govtrack.us/congress/bills/103/hr1025

Churchill, R. H. (2019). Armed in America: A history of gun rights from colonial militias to concealed carry. *Journal of American History, 106*(3), 716–717. doi:10.1093/jahist/jaz514

Clery Center. (2022). Summary of the Jeanne Cleary Act. Retrieved from https://clerycenter.org/policy-resources/the-clery-act/

Cole, K. D. (2016). Of fear and freedom: A personal view of gun rights and gun regulation. *Torch, 89*(3), 2–5.

CollegeSimply. (2021a, February 18). Tennessee public colleges: List of public colleges and universities in Tennessee. Retrieved from https://www.collegesimply.com/colleges/tennessee/public-colleges/#:~:text=There%20are%2022%20public%20colleges%20and%20universities%20in%20Tennessee%20enrolling%20222%2C001%20students

CollegeSimply. (2021b, March 06). Utah public colleges: List of public colleges and universities in Utah. Retrieved March 06, 2021, from https://www.collegesimply.com/colleges/utah/public-colleges/#:~:text=There%20are%209%20public%20colleges%20and%20universities%20in%20Utah%20enrolling%20186%2C272%20students

Cumiskey, K. M., & Hjorth, L. (2019). "I wish they could have answered their phones": Mobile communication in mass shootings. *Death Studies, 43*(7), 414-425. doi:10.1080/07481187.2018.1541940

Dahmen, N. S. (2018). Visually reporting mass shootings: U.S. newspaper photographic coverage of three mass school shootings. *American Behavioral Scientist, 62*(2), 163–180. doi:10.1177/0002764218756921

De Angelis, J., Benz, T. A., & Gillham, P. (2017). Collective security, fear of crime, and support for concealed firearms on a university campus in the western United States. *Criminal Justice Review, 42*(1), 77–94. doi:10.1177/0734016816686660

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.

District of Columbia v. Heller, 554 U.S. 570 (2008). Retrieved from https://www.oyez.org/cases/2007/07-290

Duroni, L. (2019). Out of the home and in plain sight: Our evolving Second Amendment and open carry in Wisconsin. *Marquette Law Review, 102*(4), 1305–1331.

Fleming, A., McLean, D. S., & Tatalovich, R. (2018). Debating gun control in Canada and the United States: Divergent policy frames and political cultures. *World Affairs, 181*(4), 348–371. doi:10.1177/0043820018812609

Gay, L. R., Mills, G. E., & Airasian, P. W. (2009). *Educational research: Competencies for analysis and applications* (9th ed). Boston, MA: Pearson.

Gius, M. (2019). Campus crime and concealed carry laws: Is arming students the answer? *Social Science Journal, 56*(1), 3–9. doi:10.1016/j.soscij.2018.04.004

Glavin, C. (2018, July 26). History of school shootings in the United States. Retrieved from https://www.k12academics.com/school-shootings/history-school-shootings-united-states

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

Haider-Markel, D. P., & Joslyn, M. R. (2017). Special issue editors' introduction: Gun politics. *Social Science Quarterly, 98*(2), 377–381. doi:10.1111/ssqu.12415

Hassett, M. R., Kim, B., & Seo, C. (2020). Attitudes toward concealed carry of firearms on campus: A systematic review of the literature. *Journal of School Violence, 19*(1), 48–61. doi:10.1080/15388220.2019.1703717

Hignite, L. R., Marshall, S., & Naumann, L. (2018). The ivory tower meets the inner city: Student protective and avoidance behaviors on an urban university campus. *College Student Journal, 52*(1), 118–138.

Hsiao, T. (2018). The moral case for CCOC. *Academic Questions, 31*(4), 466–471. doi:10.1007/s12129-018-9729-x

Jaadi, Z. (2021). A step-by-step explanation of principal component analysis (PCA). Retrieved from https://builtin.com/data-science/step-step-explanation-principal-component-analysis

Jensen, R. (2018). School violence through the decades. *Security Today.* Retrieved from https://securitytoday.com/articles/2018/09/14/school-violence-through-the-decades.aspx?admgarea=ht.school&m=1

Jiang, L. (2017). Perception of and reactions to job insecurity: The buffering effect of secure attachment. *Work & Stress, 31*(3), 256–275. doi:10.1080/02678373.2017.1305005

Joslyn, M. R., Haider-Markel, D. P., Baggs, M., & Bilbo, A. (2017). Emerging political identities? Gun ownership and voting in presidential elections. *Social Science Quarterly, 98*(2), 382–396. doi:10.1111/ssqu.12421

Kamal, R. D., & Burton, C. (2018). Policy gridlock versus policy shift in gun politics: A comparative veto player analysis of gun control policies in the United States and Canada. *World Affairs, 181*(4), 317–347. doi:10.1177/0043820018814356

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. doi:10.1007/s10826-018-1096-2

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. doi:10.1177/1043986219840188

Lacombe, M. J. (2019). The political weaponization of gun owners: The National Rifle Association's cultivation, dissemination, and use of a group social identity. *Journal of Politics, 81*(4), 1342–1356. doi:10.1086/704329

Laerd Statistics. (2018). Independent t-test for two samples. Retrieved from https://statistics.laerd.com/statistical-guides/independent-t-test-statistical guide.php

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. doi:10.1002/pits.22301

Lazarus, R. S. (1966). *Psychological stress and the coping process.* New York, NY: McGraw-Hill.

Lord, D. (2019, August 03). Assault weapon vs. assault rifle: What is the difference? *Journal-News.* Retrieved from https://www.journal-news.com/news/national/assault-weapon-assault-rifle-what-the-difference/LPXLAj8ZcHkPn2rLn3bOGK/

Malone, C. A., & Steidley, T. (2019). Determinants of variation in state concealed carry laws, 1970–2016. *Sociological Forum, 34*(2), 434–457. doi:10.1111/socf.12504

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. doi:10.1177/1043986219840237

McDonald v. City of Chicago, 561 U.S. 742 (2010). Retrieved from https://www.oyez.org/cases/2009/08-1521

McLean, D.S., & Sorens, J. (2019). The changing ideological politics of U.S. state firearms regulation. *Politics & Policy, 47(*4), 638-672. doi:10.1111/polp.12321

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.

Meindl, J. N., & Ivy, J. W. (2017). Mass shootings: The role of the media in promoting generalized imitation. *American Journal of Public Health, 107(*3), 368–370. doi:10.2105/AJPH.2016.303611

Merianos, A. L., King, K. A., & Vidourek, R. A. (2017). Student perceptions of safety and helpfulness of resources. *American Journal of Health Studies, 32*(2), 90-101.

Miller, S. V. (2019). What Americans think about gun control: Evidence from the General Social Survey, 1972–2016. *Social Science Quarterly, 100*(1), 272–288. doi:10.1111/ssqu.12555

Minshew, L. M. (2018). From the editorial board: On arming k-12 teachers. *High School Journal, 101*(3), 129–133. doi:10.1353/hsj.2018.0006

Muschert, G. W. (2019). Afterword: The Columbine effect on culture, policy, and me. *Journal of Contemporary Criminal Justice, 35*(3), 357–372. doi:10.1177/1043986219840238

National Conference of State Legislatures. (2019). Guns on campus: Overview. Retrieved from http://www.ncsl.org/research/education/guns-on-campus-overview.aspx

The National Teachers Hall of Fame. (2020). Enoch Brown incident. Retrieved from https://nthfmemorial.org/enoch-brown-incident/

Nedzel, N. (2014). Concealed carry: The only way to discourage mass school shootings. *Academic Questions, 27*(4), 429–435. doi:10.1007/s12129-014-9459-7

O'Leary, T. (2020, May 4). School security: Intercoms remain an important component. Retrieved from https://www.locksmithledger.com/electronics-access-control/intercom-system/article/21132324/school-security-intercoms-remain-an-important-component

Oliphant, J. (2017, June 283). Bipartisan support for some gun proposals, stark partisan divisions on many others. Retrieved from https://www.pewresearch.org/fact-tank/2017/06/23/bipartisan-support-for-some-gun-proposals-stark-partisan-divisions-on-many-others/

Pearce, M. (2020, August 19). Trump and Biden on guns: Far apart on policy and perspective. *Los Angeles Times*. Retrieved from https://www.latimes.com/politics/story/2020-08-19/trump-biden-gun-policy

Phillips, C. D. (2018). The politics of firearm safety: An emerging new balance of power. *American Journal of Public Health, 108*(7), 868–870. doi:10.2105/AJPH.2018.304462

Philpott-Jones, S. (2018). Mass shootings, mental illness, and gun control. *Hastings Center Report, 48*(2), 7–9. doi:10.1002/hast.832

Ponder, J. (2018). From the tower shootings in 1966 to campus carry in 2016: Collective trauma at the University of Texas at Austin. *International Journal of Applied Psychoanalytic Studies, 15*(4), 239–252. doi:10.1002/aps.1558

Price, J. H., Thompson, A., Khubchandani, J., Dake, J., Payton, E., & Teeple, K. (2014). University presidents' perceptions and practice regarding the carrying of concealed handguns on college campuses. *Journal of American College Health, 62*(7), 461–469. doi:10.1080/07448481.2014.920336

Reed, B. (2016). Trigger warning. *Texas Review, 37*(3/4), 127–135. Retrieved from https://medium.com/@benjaminreed/trigger-warning-890007e9912b

Regehr, C., Glancy, G.D., Carter, A., & Ramshaw, L. (2017). A comprehensive approach to managing threats of violence on a university or college campus. *International Journal of Law and Psychiatry, 54*, 140-147.

Reich, G., & Barth, J. (2017). Planting in fertile soil: The National Rifle Association and state firearms legislation. *Social Science Quarterly, 98*(2), 485–499. doi:10.1111/ssqu.12423

Richards, R. (2017). The role of interest groups and group interests on gun legislation in the U.S. House. *Social Science Quarterly, 98*(2), 471–484. doi:10.1111/ssqu.12424

Rogers, R. W. (1975). A protection motivation theory of fear appeals and attitude change. *Journal of Psychology, 91*(1), 93-114. doi:10.1080/00223980.1975.9915803

Roman, M. (2019). Anti-social media and violence. *Issues in Mental Health Nursing, 40*(6), 457–458. doi:10.1080/01612840.2019.1607125

Rowhani-Rahbar, A., Azrael, D., Lyons, V. H., Simonetti, J. A., & Miller, M. (2017). Loaded handgun carrying among U.S. adults, 2015. *American Journal of Public Health, 107*(12), 1930–1936. doi:10.2105/AJPH.2017.304072

Russ, J.; Jones, S.; and Blankenship, C. L. (2018). Student perceptions of faculty, staff, and students carrying concealed weapons on campus, *Papers & Publications, 7.* Available at: https://digitalcommons.northgeorgia.edu/papersandpubs/vol7/iss1/4

Sandersen, B., Kupczynski, L. P., Mundy, M.-A., & Gibson, A. M. (2018). Perceptions of students regarding carrying of concealed handguns on college and university campuses in Texas. *Journal of Academic Administration in Higher Education, 14*(2), 19–26.

Schafer, J., Lee, C., Burruss, G. W., & Giblin, M. J. (2018). College student perceptions of campus safety initiatives. *Criminal Justice Policy Review, 29*(4), 319-340.

Schildkraut, J., Carr, C. M., & Terranova, V. (2018). Armed and academic: Perceptions of college students on CCOC policies. *Journal of School Violence, 17*(4), 487–499. doi:10.1080/15388220.2018.1449655

Schildkraut, J., Elsass, H. J., & Meredith, K. (2018). Mass shootings and the media: Why all events are not created equal. *Journal of Crime & Justice, 41*(3), 223–243. doi:10.1080/0735648X.2017.1284689

Schildkraut, J., & Hernandez, T. C. (2014). Laws that bit the bullet: A review of legislative responses to school shootings. *American Journal of Criminal Justice, 39*(2), 358-374. doi:10.1007/s12103-013-9214-6

Shepperd, J. A., Pogge, G., Losee, J. E., Lipsey, N. P., & Redford, L. (2018). Gun attitudes on campus: United and divided by safety needs. *Journal of Social Psychology, 158*(5), 616–625. doi:10.1080/00224545.2017.1412932

Sidhu, S. S. (2017). Name no names: The role of the media in reporting mass shootings. *Journal of the American Academy of Child & Adolescent Psychiatry, 56*(1), 3–4. doi:10.1016/j.jaac.2016.10.004

Silva, J. R., & Capellan, J. A. (2019a). A comparative analysis of media coverage of mass public shootings: Examining rampage, disgruntled employee, school, and lone-wolf terrorist shootings in the United States. *Criminal Justice Policy Review, 30*(9), 1312–1341. doi:10.1177/0887403418786556

Silva, J. R., & Capellan, J. A. (2019b). The media's coverage of mass public shootings in America: Fifty years of newsworthiness. *International Journal of Comparative & Applied Criminal Justice, 43*(1), 77–97. doi:10.1080/01924036.2018.1437458

Soboroff, S., Lovekamp, W., & Jenkot, R. (2019). Social status and the effects of legal concealed firearms on college campuses. *Journal of Criminal Justice Education, 30(3),* 376–388. doi:10.1080/10511253.2018.1520270

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. doi:10.1353/csj.2020.0005

Somers, P., & Phelps, N. (2018). Not chilly enough? Texas campus carry and academic freedom. *AAUP Journal of Academic Freedom, 9*, 1–15.

St. Clair, P., & Palmer, D. (n.d.). A history of Alexander School, Inc. Retrieved from http://alexanderschoolsinc.org/asi_history/19451955thirddecade.html

StatsDirect. (2020). Principal components analysis and Cronbach's alpha reliability coefficient. Retrieved from https://www.statsdirect.com/help/regression_and_correlation/pca.htm

Steidley, T., & Colen, C. G. (2017). Framing the gun control debate: Press releases and framing strategies of the National Rifle Association and the Brady Campaign. *Social Science Quarterly, 98*(2), 608–627. doi:10.1111/ssqu.12323

Support Jeffco Kids. (2018, March 24). Enough is enough, the data. Retrieved from https://www.supportjeffcokids.org/enough-is-enough-the-data/

The Carnegie Classification of Institutions of Higher Education. (2017). Carnegie size and setting classification description. Retrieved from https://carnegieclassifications.iu.edu/

Thompson, A., Price, J., Dake, J., & Teeple, K. (2013). Faculty perceptions and practices regarding carrying concealed handguns on university campuses. *Journal of Community Health, 38*(2), 366–373. doi:10.1007/s10900-012-9626-0

Thompson, A., Price, J., Dake, J., Teeple, K., Bassler, S., Khubchandani, J., Kerr, D., Brookins Fisher, J., Rickard, M., Oden, L., Aduroja, A., Lyde, A., Philips, K., Adeyanju, M., Eggleston, B., Ferng-Kuo, S.-F., Duquette, D., Bartholomew, K., & Stratton, C. (2013). Student perceptions and practices regarding carrying concealed handguns on university campuses. *Journal of American College Health, 61*(5), 243–253. doi:10.1080/07448481.2013.799478

Turchan, B., Zeoli, A. M., & Kwiatkowski, C. (2017). Reacting to the improbable: Handgun carrying permit application rates in the wake of high-profile mass shootings. *Homicide Studies, 21*(4), 267–286. doi:10.1177/1088767917699657

Ulfers, J. C. (2019). *Exploratory case study investigating college faculties perceptions on concealed carry of firearms at college campuses* (Doctoral dissertation). Available from ProQuest Dissertations & Theses Global. (UMI No. 13878552)

An updated list of states that allow concealed guns on campus. (2020, February 21). Campus Safety Magazine. Retrieved from https://www.campussafetymagazine.com/university/list-of-states-that-allow-concealed-carry-guns-on-campus/#

U.S. Concealed Carry Association. (2020). Born to protect. Retrieved from https://www.usconcealedcarry.com/

U.S. Const. amend. II (1987). *The Constitution of the United States* [Amend. II].

U. S. Department of Justice. (2018, December 18). *Department of Justice announces bump-stock-type devices final rule* [Press release]. Retrieved https://www.justice.gov/opa/pr/department-justice-announces-bump-stock-type-devices-final-rule

Verrecchia, P. J., & Hendrix, N. (2018). College students perceptions toward carrying concealed guns on college campuses. *Journal of Criminal Justice Education, 29*(1), 62–78. doi:10.1080/10511253.2017.1344260

Vizzard, W. J. (2015). The current and future state of gun policy in the United States. *Journal of Criminal Law & Criminology, 104*(4), 879–904.

Ward, L., Nguyen, D. J., & Nguyen, D. H. K. (2018). No smoking guns here: Residence life directors' perspectives on concealed carry in on-campus living communities. *Journal of College & University Student Housing, 44*(3), 112–125.

White, K. (2019). Do school uniforms fit? Retrieved from https://aasa.org/SchoolAdministratorArticle.aspx?id=14472

Wofford, B. (2017). Inside the fight over guns on campus. *Rolling Stone, 1284,* 28-31.

Woldoff, R. A., Litchfield, R. C., & Sycafoose Matthews, A. (2017). Unpacking heat: Dueling identities and complex views on gun control among rural police. *Rural Sociology, 82*(3), 444–472. doi:10.1111/ruso.12142

Wolfson, J. A., Teret, S. P., Azrael, D., & Miller, M. (2017). US public opinion on carrying firearms in public places. *American Journal of Public Health, 107*(6), 929–937. doi:10.2105/AJPH.2017.303712

Wood, P. (2014). Gun-free campuses. *Academic Questions, 27*(4), 426–428. doi:10.1007/s12129-014-9463-y

APPENDICES

APPENDIX A

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 Alyssa Stock. The study is comparing employees' perceptions of safety pertaining to CCOC. The researcher is seeking to determine whether employees' perceptions of safety are different on campuses where only employees are allowed to carry concealed guns versus campuses that allow anyone with a concealed carry license to carry. You 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 higher education institutions deal with mass shootings, they must adapt new policies and procedures to combat these situations. One of the policies they must consider is the academic institution's stance on CCOC. The purpose of this casual-comparative study is to examine the perception of safety of employees who work at colleges that only allow employees with a concealed carry permit to conceal carry versus colleges that allow anyone with a concealed carry permit to carry on campus. This casual-comparative study is designed to study the impact of concealed carry laws on employees' perceptions of safety at public academic institutions. The research involves gathering data via an online survey completed through QuestionPro.

Selection and Sampling

The researcher limited the respondents to employees who are over the age of 18 years old that work in public academic institutions in the states of Utah and Tennessee. The researcher chose these states because they have unique CCOC laws. Other states have conflicting policies within the state itself and data collected would be inaccurate. The state of Tennessee only allows employee members with a concealed carry license to carry on campus. Utah allows anyone with a concealed carry license to carry on campus. The survey leaves it up to the individuals to complete, allowing the researcher no control over the breakdown of demographics of the respondents.

Procedures

Presidents and Chancellors of all public academic institutions in the states of Utah and Tennessee will receive an email inviting them to participate in this study. If the President or Chancellor accepts, then the researcher will invite all employees of that academic intuition to participate in the study through email that includes the survey link. The survey is broken into five sections, to have all necessary data to examine the correlation between the respondent's background with weapons and their perception of safety on a campus that allows CCOC. The format of the survey included yes/no questions and 4-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 are not being invited to participate in this survey because they have different policies about CCOC. Students are not being invited because this study focuses only on employee perceptions of safety pertaining to CCOC.

Survey Commitment

In this survey you will be asked questions about your perceptions of safety on campuses pertaining to 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. The only identifying question that isolates a specific participant is the demographic question of which state they work in, either Utah or Tennessee. All other responses are completely confidential. The survey will be administered via QuestionPro. QuestionPro 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 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 institution as a whole. Several studies have examined students' perspectives, but little research has explored employees' perspectives. Understanding the perspectives of employees is vital, since the employees are the individuals who could be carrying a concealed carry weapon to protect themselves and their students. If you have any questions regarding the survey, please contact me at (224)458-3016 or stocka@msdr9.org.

Thank you,
Alyssa Stock

APPENDIX B

Southwest Baptist University Research Review Board

Southwest Baptist UNIVERSITY

COLLEGE OF HEALTH PROFESSIONS
4431 S. Fremont
Springfield, Missouri 65804
(417) 820-2069 | FAX (417) 887-4847

June 10, 2021

Re: **Differences between employees' perceptions of safety regarding concealed carry on public campuses in Utah and Tennessee**

Dear Ms. Stock,

On June 10th, 2021 a review of your application and supporting documents for the above named research proposal was completed. The Research Review Board (RRB) for Southwest Baptist University has determined that the proposed research project meets the criteria for Exempt status as per policy 1.15.3 in the faculty guidelines. As per the above policy "If the project is certified exempt, the principle investigator need not resubmit the project for continuing RRB review as long as there are no modifications in the exempted procedures". The study has now been approved, therefore, work on the project may begin.

If any modifications to the exempted procedures are made, the RRB will need to complete a new review of the changes to determine if the project remains Exempt or if further review is necessary.

Congratulations on the approval of your project, we wish you well during its completion. If you have any questions regarding the RRB's decision, please contact me at sxmorrow@sbuniv.edu.

Sincerely,

Suzie Morrow

Suzie Morrow, DNP, RN, CNE
Southwest Baptist University
Research Review Board, Chair
Sxmorrow @sbuniv.edu
(417) 893-7138

APPENDIX C

Request for Academic Institution Approval to Conduct Research

Dear President/Chancellor,

My name is Alyssa Stock and I am a Doctoral student at Southwest Baptist University. I am currently working on my dissertation about the perceptions of safety on campuses that allow concealed carry. I would like to use your academic institution as part of my research setting to perform my study through the use of a survey completed through QuestionPro. The purpose of this casual-comparative study is to examine the perception of safety of employees who work at colleges that only allow employees with a concealed carry permit to conceal carry versus colleges that allow anyone with a concealed carry permit to carry on campus. 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 institution as a whole. Several studies have examined students' perspectives, but little research has been covered on employees' perspectives. Understanding the perspectives of employees is vital, since the employees are the individuals who could be carrying a concealed carry weapon to protect themselves and their students.

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 academic institution, please sign below.

_____ _____

Print Date

_____

Signature

I greatly appreciate your consideration of my request,

Alyssa Stock

APPENDIX D

Modified Survey

Demographic & Background Information	
Gender	(1) Male (2) Female (3) Intergender
Hispanic or Latino	(1) Yes (2) No
Which of these bests describes your background? You can choose multiple.	(1) White (2) African American (3) Asian (4) Hispanic (5) Other
Faculty or Staff	(1) Faculty (2) Staff
Department/Office Staff	(1) Student Services & Related Area (2) Administration (3) Business/Registrars/Financial (4) Academic Department (5) Service Related (6) Other
Political Affiliation	(1) Democrat (2) Republican (3) Independent (4) Libertarian (5) No Affiliation
How many years have you worked in Higher Education?	(1) 0-5 (2) 6-10 (3) 11-15 (4) 16-20 (5) 21-25 (6) 26+
What is your employment status?	(1) Full-time (2) Part-time
In which state is your institution located?	(1) TN (2) UT

Gun Ownership & Background	
Do you own a Firearm?	(1) Yes (2) No
What is the main reason you own a firearm?	(1) Hunting/Sport (2) Personal Safety (3) Gift (4) Collect (5) Other

Are you a member of a firearm organization?	(1) Yes (2) No
Have you ever received formal firearm training for shooting a handgun?	(1) Yes (2) No
Do you have a valid permit to carry a concealed handgun?	(1) Yes (2) No
Did you have a firearm in your home growing up?	(1) Yes (2) No

Campus Violence & Victimization	
How safe do you feel on campus?	(1) Not Safe at all (2) Not Very Safe (3) Safe (4) Very Safe
How concerned are you about being a victim of violence on campus?	(1) Not Concerned at All (2) Not Very Concerned (3) Concerned (4) Very Concerned
Do you avoid places on or around campus out of concern for your safety?	(1) Yes (2) No
Have you ever been a victim of crime on Campus? (Choose all that apply)	(1) Violent Crime (Assault, Attacked, Robbery) (2) Personal Crime (Stalking, harassment, Threat, Intimidation) (3) Property Crime (Theft, Vandalism) (4) No
Has someone close to you ever been a victim of crime on campus? (Choose all that apply)	(1) Violent Crime (Assault, Attacked, Robbery) (2) Personal Crime (Stalking, harassment, Threat, Intimidation)

	(3) Property Crime (Theft, Vandalism) (4) No
Have you ever been a victim of crime off-Campus? (Choose all that apply)	(1) Violent Crime (Assault, Attacked, Robbery) (2) Personal Crime (Stalking, harassment, Threat, Intimidation) (3) Property Crime (Theft, Vandalism) (4) No
In the last year, has there been a crime on your campus where the perpetrator used a firearm?	(1) Yes (2) No
In the last year, has your campus been placed in lockdown due to violence or the threat of violence?	(1) Yes (2) No
Does your institution have a policy regarding firearms on campus?	(1) Yes (2) No (3) Don't Know
How confident are you that the police can prevent violent crime on campus?	(1) Not Confident At All (2) Not Very Confident (3) Confident (4) Very Confident

Support & Conditions	
How supportive are you of people with a permit carrying concealed handguns off campus?	(1) Not Supportive At All (2) Not Very Supportive (3) Supportive (4) Very Supportive

How supportive are you of students carrying concealed handguns on campus?	(1) Not Supportive At All (2) Not Very Supportive (3) Supportive (4) Very Supportive
How supportive are you of employees carrying concealed handguns on campus?	(1) Not Supportive At All (2) Not Very Supportive (3) Supportive (4) Very Supportive
How supportive are you of staff carrying concealed handguns on campus?	(1) Not Supportive At All (2) Not Very Supportive (3) Supportive (4) Very Supportive
How likely is it that you would obtain a permit if carrying a handgun on campus was legal?	(1) Not Likely At All (2) Not Very Likely (3) Likely (4) Very Likely
How likely is it that you would carry a concealed handgun on campus, if it was legal?	(1) Not Likely At All (2) Not Very Likely (3) Likely (4) Very Likely (5) I Already Have One
In your opinion, how safe would most students feel if employees were permitted to carry concealed handguns on campus?	(1) Very Unsafe (2) Somewhat Unsafe (3) Slightly Safer (4) Much Safer
In your opinion, how safe would most employees feel if students were permitted to carry concealed handguns on campus?	(1) Very Unsafe (2) Somewhat Unsafe (3) Slightly Safer (4) Much Safer
Before anyone can have a concealed carry permit, they should have to pass a firearm training course.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

To keep a concealed carry permit, individuals should have to periodically practice at a firing range to maintain their skills.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

Safety Perceptions (with guns)	
I would feel safer carrying a concealed handgun on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
People would be less likely to bother me on campus if I carried a concealed handgun on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
I would feel more able to protect myself if I carried a concealed handgun on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If I was trying to defend myself on campus with a gun and another person with a gun showed up, they might mistakenly shoot me.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If I carried a concealed handgun on campus and had to shoot at a criminal with my gun, I might easily miss and hit another person.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting concealed handguns on campus, some handguns might accidently discharge and injure someone.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
I would feel less safe if students carried concealed handguns on my campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

I would feel less safe if employees carried concealed handguns on my campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting students to carry concealed handguns on campus, it would likely result in a higher rate of fatal suicides by students.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting students to carry concealed handguns on campus, it would likely result in a higher rate of fatal homicides on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting concealed handguns on campus, it would negatively impact the educational environment on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting concealed handguns on campus, it would divert scarce resources away from academic needs to greater security spending on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

APPENDIX E

Follow-Up Email

Good Morning,
My name is Alyssa Stock and I am a Doctoral student at Southwest Baptist University. I am currently working on my dissertation about employee perceptions of safety on campuses that allow concealed carry. I understand that you are very busy and these are tough times; 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 eight to ten minutes of your time.

This study has been reviewed and approved by the RRB Committee at Southwest Baptist University. Please feel free to email (stocka@msdr9.org) with any questions you may have. I greatly appreciate your consideration of my request and I REALLY hope you are able to complete the survey!

Survey Link

Thank you and have a blessed week,
Alyssa Stock

APPENDIX F

Original Survey

Demographic & Background Information	
Sex	(1) Male (2) Female (3) Intersex
Hispanic or Latino	(1) Yes (2) No
Which of these bests describes your background? You can choose multiple	(1) White (2) African American (3) Asian (4) Hispanic (5) Other
Academic Rank	(1) Freshman (2) Sophomore (3) Junior (4) Senior
Department/Office Staff	(1) Student Services & Related Area (2) Administration (3)Business/Registrars/Financial (4) Academic Department (5) Service Related (6) Other
Political Affiliation	(1) Democrat (2) Republican (3) Independent (4) Libertarian
How many years have you worked in Higher Education?	(1) 0-5 (2) 6-10 (3) 11-15 (4) 16-20 (5) 21-25 (6) 26+
In which state is your institution located?	(1) MN (2) MT (3) ND (4) SD
As a current student where do you live?	(1) On campus (2) Off Campus

Gun Ownership & Background	
Member of a Firearm Organization?	(1) Yes (2) No
Number of Firearms owned?	(1) 0 (2) 1 (3) 2+

Do you own a Firearm?	(1) Yes (2) No
If you own a Firearm, what type(s) do you own?	(1) Shotgun (2) Rifle (3) Handgun (4) Other
If you own a firearm, where do you keep it?	(1) Parents' House (2) My Apartment (3) Car (4) Dorm (5) Friends Home (6) University Police (7) Other
What is the main reason you own a firearm?	(1) Hunting/Sport (2) Personal Safety (3) Gift (4) Collect (5) Other
Are you a member of a firearm organization?	(1) Yes (2) No
Have you ever received formal firearm training for shooting a handgun?	(1) Yes (2) No
Do you have a valid permit to carry a concealed handgun?	(1) Yes (2) No
Did you have a firearm in your home growing up?	(1) Yes (2) No

Campus Violence & Victimization	
How safe do you feel on campus?	(1) Not Safe at all (2) Not Very Safe (3) Safe (4) Very Safe
How concerned are you about being a victim of violence on campus?	(1) Not concerned at all (2) Not very concerned (3) Concerned (4) Very concerned
Do you avoid places on or around campus out of concern for your safety?	(1) Yes (2) No

Have you ever been a victim of crime on Campus? (Choose all that apply)	(1) Violent Crime (Assault, Attacked, Robbery) (2) Personal Crime (Stalking, harassment, Threat, Intimidation) (3) Property Crime (Theft, Vandalism) (4) No
Has someone close to you ever been a victim of crime on campus? (Choose all that apply)	(1) Violent Crime (Assault, Attacked, Robbery) (2) Personal Crime (Stalking, harassment, Threat, Intimidation) (3) Property Crime (Theft, Vandalism) (4) No
Have you ever been a victim of crime off-Campus? (Choose all that apply)	(1) Violent Crime (Assault, Attacked, Robbery) (2) Personal Crime (Stalking, harassment, Threat, Intimidation) (3) Property Crime (Theft, Vandalism) (4) No
In the last year, has there been a crime on your campus where the perpetrator used a firearm?	(1) Yes (2) No
In the last year, has your campus been placed in lockdown due to violence or the threat of violence?	(1) Yes (2) No
Does your university have a policy regarding firearms on campus?	(1) Yes (2) No (3) Don't Know

Have you ever carried a concealed handgun on your person off campus?	(1) Yes (2) No
Have you ever carried a concealed handgun on your person on the university campus?	(1) Yes (2) No
How confident are you that the police can prevent violent crime on campus?	(1) Very Confident (2) Confident (3) Not Very Confident (4) Not Confident at all

Support & Conditions	
How supportive are you of people with a permit carrying concealed handguns off campus?	(1) Not Supportive at all (2) Not Very Supportive (3) Supportive (4) Very Supportive
How supportive are you of students, faculty, and visitors carrying concealed handguns on campus?	(1) Not Supportive at all (2) Not Very Supportive (3) Supportive (4) Very Supportive
How likely is it that you would obtain a permit if carrying a handgun on campus was legal?	(1) Not Likely at all (2) Not Very Likely (3) Likely (4) Very Likely
How likely is it that you would carry a concealed handgun on campus, if it was legal?	(1) Not Likely at all (2) Not Very Likely (3) Likely (4) Very Likely (5) I already have one
If it was legal, what percent of students on your campus do you think would carry a concealed handgun on campus?	(1) 0 (2) 10 (3) 20 (4) 30 (5) 40 (6) 50 (7) 60 (8) 70 (9) 80 (10) 90 (11) 100

How safe would most students feel if faculty and staff were permitted to carry concealed handguns on campus?	(1) Very Unsafe (2) Somewhat Unsafe (3) Slightly Safer (4) Much Safer
How safe would most faculty and staff feel if students were permitted to carry concealed handguns on campus?	(1) Very Unsafe (2) Somewhat Unsafe (3) Slightly Safer (4) Much Safer
Before anyone can have a concealed carry permit, they should have to pass a firearm training course.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
To keep a concealed carry permit, individuals should have to periodically practice at a firing range to maintain their skills.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
Individuals who apply for a concealed carry permit should have to show proof of a minimum of liability insurance in case they wound or kill an innocent person.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

Safety Perceptions (with weapons)	
I would feel safer carrying a concealed handgun on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

People would be less likely to bother me on campus if I carried a concealed handgun on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
I would feel more able to protect myself if I carried a concealed handgun on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If I was trying to defend myself on campus with a gun and another person with a gun showed up, they might mistakenly shoot me.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If I carried a concealed handgun on campus and had to shoot at a criminal with my gun, I might easily miss and hit another person.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting concealed handguns on campus, some handguns might accidently discharge and injure someone.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
I would feel less safe if students, faculty, and visitors carried concealed handguns on my campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting students to carry concealed handguns on campus, it would likely result in a higher rate of fatal suicides by students.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

If a state law was passed permitting students to carry concealed handguns on campus, it would likely result in a higher rate of fatal homicides on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting concealed handguns on campus, it would negatively impact the education environment on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree
If a state law was passed permitting concealed handguns on campus, it would divert scarce resources away from academic needs to greater security spending on campus.	(1) Strongly Agree (2) Agree (3) Disagree (4) Strongly Disagree

APPENDIX G

Request to Use Survey

Dr. Thompson,

My name is Alyssa Stock and I am a Doctoral student at Southwest Baptist University. I am currently working on my dissertation about the perceptions of safety on campuses that allow concealed carry. I have included my research questions below. While I was researching my topic, I came across you and your colleagues' study "Student Perceptions and Practices Regarding Carrying Concealed Handguns on University Campuses" published in the *Journal of American College Health*. I would like to ask your permission to use and slightly modify your 2013 survey used in the article as the survey instrument for my dissertation. Your survey would work perfectly for my dissertation! 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.

Research Questions:

1. What is the difference in employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

2. What is the difference in employees' perceptions of safety on rural campuses versus urban campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

3. What is the difference in employees' perceptions of safety on large campuses versus medium campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

4. What is the difference in part-time versus full-time employees' perceptions of safety on campuses where only employees are allowed to carry concealed guns versus where anyone with a concealed carry license may carry?

I greatly appreciate your consideration of my request,

Alyssa Stock