1-1-2018

Gun-Free Zones: A Geographical Opinion Study on Attitudes Toward Gun-Free Zones and the Safety Impact on Residents

Sean Grier
sg1273@mynsu.nova.edu

Gun-Free Zones:
A Geographical Opinion Study on
Attitudes Toward Gun-Free Zones and the Safety Impact on Residents

by
Sean Grier

Dissertation Committee

Dr. Grace Telesco, Chairperson
Dr. Gregory Vecchi, Committee Member
Dr. Sebastian Gorka, Committee Member

A Dissertation Submitted to the
Department of Justice and Human Services
in the College of Arts, Humanities, and Social Sciences
of Nova Southeastern University
in Partial Fulfillment of the Requirements
for the Degree of Doctor of Philosophy

Nova Southeastern University
July 2018

Approval Page

This dissertation was submitted by, SEAN GRIER, under the direction of the persons listed below. It was submitted to the Department of Justice and Human Services and approved in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Nova Southeastern University.

Approved: Dr. Grace A. Telesco Date: 8/7/18
Committee Chair's Signature

Approved: Date: 8·2·2018
Committee Member's Signature

Approved: Date: 8/3/2018
Committee Member's Signature

Approved: Tammy Kushner Date: 8/7/18
Tammy Kushner, Psy.D.
Executive Director of Administration

Statement of Original Work

I declare the following:

I have read the Code of Student Conduct and Academic Responsibility as described in the *Student Handbook* of Nova Southeastern University. This applied dissertation represents my original work, except where I have acknowledged the ideas, words, or material of other authors.

Where another author's ideas have been presented in this applied dissertation, I have acknowledged the author's ideas by citing them in the required style.

Where another author's words have been presented in this applied dissertation, I have acknowledged the author's words by using appropriate quotation devices and citations in the required style.

I have obtained permission from the author or publisher—in accordance with the required guidelines—to include any copyrighted material (e.g., tables, figures, survey instruments, large portions of text) in this applied dissertation manuscript.

___*Sean Grier*_____
Name >*above the line, type your name*<

___July 19, 2018_____
Date >*above the line, type the date, e.g.,* May 15, 2016<

Acknowledgements and Dedication

This work is dedicated to my lovely wife, Debra Grier, as well as our five children: Nathanael, Nathalie, Noah, Naomi, and Noreen. They have been with me through the entire process and without their support it would not be possible. My family managed to deal with me during the long hours spent working on this project, and they continually provided unending support. To all I thank you and love you!

I would like to provide thanks to my dear friend, Dr. Brian Parrish. He provided the motivation I needed to begin this endeavor and see it to the end. Thank you!

I would like to give a special thanks to my chair, Dr. Grace Telesco. She has been with me throughout the entire journey. Dr. Telesco was one of my first professors in the program, and from the beginning she provided outstanding support. She has a delicate way of providing essential critiques while maintaining a positive outlook. I am very thankful for her assistance and willingness to stick with me through the process.

I would also like to thank my committee members, Dr. Gregory Vecchi and Dr. Sebastian Gorka. Both have been extremely supportive of me during this process and their input has been both encouraging and helpful. I must say that without the support of my committee I would not be here, so again, thank you!

Finally, I would like to thank all of the faculty of the criminal justice department at Nova Southeastern University. Collectively, they are a fantastic group of mentors and teachers. Regardless of what class I took or who I contacted for assistance, I always received what I needed. I am indebted to this program and all of the assistance of the faculty and staff. Thank you!

Abstract

Gun-Free Zones: A Geographical Opinion Study on Attitudes Toward Gun-Free Zones and the Safety Impact on Residents. Sean Grier, 2018: Applied Dissertation, Nova Southeastern University, Criminal Justice Institute. Keywords: gun violence, gun control, gun policy, gun-free zones, mass shootings

Gun violence is a pandemic problem in the United States, resulting in over two thirds of all homicides each year. Consequently, gun related policies have been fiercely debated within the political spectrum, with the 20th century seeing a dramatic increase in gun control legislation. Gun-free zones are designated areas that strictly prohibit all private citizens from carrying a firearm, even those with concealed weapon permits. The statistics indicate that numerous instances of gun related mass shootings have occurred within the confines of these gun-free zones (schools, movie theatres, government installations, etc.). However, little research exists to understand whether citizens actually feel any safer when they are in a gun-free zone.

The purpose of this study was to explore citizens' perceptions about gun control policies, specifically about using gun-free zones, who resided in the five states with the highest rates of gun violence per capita—in descending order, these included Virginia, Florida, Texas, Nevada, and Connecticut. Moreover, these five states were the locations of the top five deadliest mass shootings in U.S. history to date. The researcher also discovered how residents felt about pro-gun areas, where responsible citizens could legally carry firearms, as well as determine whether gun-free zones influenced their likelihood of visiting a prescribed location. Finally, the study sought to understand residents' perceptions regarding using gun-free zones pertaining to their impact on reducing incidents of mass shootings. The researcher filled the gap in the literature regarding knowledge pertaining to citizens' perceptions about using specific gun control measures, such as gun-free zones, and the influence that the historical evidence had on their perceptions.

The answer to RQ1 (do residents associate using gun-free zones with feelings of safety or feelings of concern?) was that participants were twice as likely to associate using gun-free zones with feelings of concern rather than feelings of safety. The answer to the first part of RQ2 (whether participants believed that gun-free zones reduced gun-related violence) was *no*, based on a 2-to-1 ratio. Responses to the impact of gun control measures on reducing gun violence were closely matched to perceptions of the role of gun-free zones in reducing gun violence. The answer to the second part of RQ2 (do residents believe that gun-free zones lower the occurrences of mass shooting incidents?) was *no*, again based on a 2-to-1 ratio. The answer to the third and final part of RQ2 (whether participants' perceptions correlated to the historical/empirical evidence of the location of mass shootings as primarily inside of or outside of gun-free zones) was *yes* for participants from Florida, Texas, Nevada, and Connecticut and no for participants from Virginia.

Table of Contents

Page

Appendices

Tables

Figure

Chapter 1: Introduction

Nature of the Research Problem

The issue of gun violence is a known problem of paramount importance, but how to deal with this problem is open for debate. There are generally two opposing viewpoints on the issue of gun control: one that supports strict gun control legislation and one that is strongly in favor of law abiding citizens exercising their constitutional rights to keep and bear arms. Considering this idea of strict gun control, Stell (2004) explained, "Strict gun control (SGC) has no clear meaning, so it is necessary to clarify it… as an array of legally sanctioned restrictions to impose firearm scarcity on the general population" (p. 38). However, the question should be whether these strict gun control measures have any measurable influence on reducing gun violence.

Based on the rate of gun violence, existing gun policies have not corrected the problem; therefore, one both analyzed existing policies and brainstormed about potential new policies that could reduce instances of gun violence. Identifying positive gun control policies that were effective at reducing gun violence and still did not infringe on the constitutional rights of individual citizens should be the goal of all legislators. Both of these concepts, reducing gun violence and protecting constitutional rights, were serious issues that warranted extensive research.

Considering the importance of this topic, one should gather the facts relating to the issue and incorporate those facts into any policy decision. From this perspective, the data obtained by this study was of consequential importance if leaders could use these to create, amend, or reduce existing gun control policies. However, to accomplish this task, one should use empirical and factual information to develop solutions. Unfortunately,

Kahan and Braman (2003) argued that in the real world, facts did not always influence gun policies. They claimed that cultural worldviews had more of an influence on gun policies compared to empirical evidence. Therefore, Kahan and Braman stated individuals accepted or dismissed the validity and effectiveness of a gun policy based on whether it agreed with or conflicted with their cultural values. For this reason, Kahan and Braman further argued that leaders should encourage the general public to place more emphasis on the empirical evidence and recognize the influence of their own cultural presuppositions.

The above-mentioned view from Kahan and Braman (2003) contrasted the one proposed by Cook and Ludwig (2003). Cook and Ludwig argued that factual information influenced popular opinion, and empirical evidence played an important role in guiding public policy independent of its influence on public opinion. Cook and Ludwig (2003) maintained that the goal of empirical research is to determine: "what works and at what cost" (p. 1329). Furthermore, Cook and Ludwig (2003) clarified that they did not seek to resolve the gun control controversy; rather, their desire was to provide some information that "at least some voters and authorities may find useful" (p. 1329). Should this also prove true for this dissertation, this researcher would echo these sentiments and contend that research was necessary that could be useful to both voters and policy makers. Based on these conclusions, the attitudes of the general public were important to policy related decisions. Therefore, this researcher sought to identify the attitudes and perceptions of the general public related to gun control policies, specifically using gun-free zones. The information provided was beneficial to policy makers and could be used for future gun control policy related decisions.

While there might be truth in both of the aforementioned opinions, empirical evidence should be the foundational and driving force behind any public policy decisions. There was a distinct gap in the literature relating to any connections between public opinion on gun control issues and the empirical evidence. For that reason, this researcher sought to produce empirical evidence to understand the extent to which public opinion corresponded with or opposed the evidence. If public opinion was found to stand in opposition to the empirical evidence, then efforts should be made to correct this situation so the general public could fully understand the issue and make rational judgments based on the scientific evidence.

Concerning the empirical evidence, with the exception of one single attack in Tucson, AZ in 2011, every other incident involving three or more people being killed by a gun occurred in an area where private citizens were not authorized to carry a firearm (Lott, 2012). Therefore, using gun-free zones might pose a serious problem that one should investigate. One should determine if using gun-free zones had any positive impact on reducing gun violence, specifically instances of mass shootings. Directly related to this issue was whether citizens felt any safer when they were physically located within a gun-free zone and if those perceptions correlated to the historical evidence.

Little empirical data existed on the impact that gun-free zones had on reducing violence or if using gun-free zones might actually increase the likelihood of a mass shooting incident. The rationale for this argument was based on a brief analysis of recent mass shooting incidents, which indicated that an overwhelming majority of these types of tragedies did occur within the confines of a gun-free zone. Examples in 2012 alone included the movie theater shooting in Aurora, CO; a mass shooting at a Sikh temple in

Wisconsin; and the horrific elementary school mass shooting in Newtown, CT. Regarding the Aurora, CO shooting in particular, people believed the shooter, James Eagan Holmes, specifically chose that movie theater due to it being labeled a gun-free zone; therefore, he knew there would be little resistance by citizen bystanders against his attack (Lott, 2012).

As previously mentioned, a gap existed in the literature related to the attitudes and perceptions of citizens about using gun control policies in general and was nearly absent regarding using gun-free zones in particular. Other scholars have noted that a gap existed, such as Robbers (2005), who contended, "There are also few studies that have examined factors influencing attitudes towards gun control in the United States" (p. 79). Therefore, the purpose of this study was to explore citizens' perceptions about gun control policies, specifically about using gun-free zones, who resided in the five states with the highest rates of gun violence per capita—in descending order, these included Virginia, Florida, Texas, Nevada, and Connecticut. In completing this task, the researcher attempted to address the gap currently existed in the literature surrounding the attitudes of citizens related to using gun-free zones. Accordingly, this researcher provided beneficial information that legislators and policy makers could use to make sound decisions regarding future gun control initiatives. This dissertation included a problem statement, the dissertation goal, a review of the relevant literature, the findings of the research, and a discussion that provided conclusions and recommendations for future research.

Background and Significance

As previously mentioned, gun violence was a prevalent issue that researchers have debated in the United States relating to how the leaders should handle the problem.

Many scholars have noted that, worldwide, the United States ranks among the highest in both rates of gun ownership and homicides (Hoskin, 2011). Other scholars have noted that the statistics show that approximately 80 Americans are killed through gun violence every day (Nickitas, 2013). Some criminologists have argued that there is a direct correlation between gun availability and violence (Hoskin, 2001). However, conflicting research existed that did not support the idea of a solid relationship between the availability of firearms and violence (Altheimer & Boswell, 2012). Regardless of any connection that may or may not exist between gun availability and violence, recent statistical information reveals that guns are responsible for nearly two thirds of all homicides in America each year (Smith & Cooper, 2013). Consequently, the evidence also reveals that the issue of gun violence is a serious problem in the United States, to such a magnitude that many have argued that gun violence should be treated as a public health crisis (Nickitas, 2013).

The methods by which legislators should deal with this issue have been the cause of controversy between gun control advocates and those who support the right to keep and bear arms. Still, what both sides of the political spectrum do agree on is that the main purpose of gun policy in the United States is to keep firearms out of the hands of violent criminals (Jacobs & Potter, 1995). Proponents of gun control measures have proposed a variety of regulations that may reduce incidents of gun violence. Most gun control advocates would argue for a complete ban on firearms; however, they have recognized the unconstitutionality of this opinion. Nevertheless, Stell (2004) highlighted that supporters of strict gun control measures avowed that legal citizens should also be restricted in their access to firearms. Most gun control laws attempt to "strike a balance

between permitting law-abiding citizens to obtain firearms with relative ease and preventing certain categories of presumptively irresponsible people from purchasing and possessing firearms" (Jacobs & Potter, 1995, p. 94).

One particular policy that many gun control supporters have advanced is using gun-free zones (Desmond, 2008). Gun-free zones are essentially a geographically limited ban that prohibits any unauthorized individual from carrying a firearm in a prescribed area (such as schools, government buildings, churches, etc.). These were initially created in the United States by the Gun-free School Zone Act of 1990 (18 U.S.C. § 922). In a similar fashion, the United Nations defined a gun-free zone as "geographically limited spaces where the carrying or possession of guns by civilians is prohibited to reduce armed violence and promote public safety" (Pfiffner & Sutton, 2013, p. 4). The distinct feature of this definition was that the purpose of gun-free zones was to "reduce armed violence and promote public safety" (Pfiffner & Sutton, 2013, p. 4). This researcher sought to understand, from a statistical perspective, if gun-free zones in the United States had in fact "reduced armed violence" (Pfiffner & Sutton, 2013, p. 4); additionally, the researcher attempted to understand citizens' perceptions regarding ways gun-free zones could promote public safety.

While these gun-free zones were implemented at locations across the country, researchers have debated whether the Gun-free School Zone Act is a violation of the constitution (Farmer, 1994; Hetzner, 2011). Regardless of the dispute over the constitutionality of gun-free zones, the use is steadily increasing in jurisdictions throughout the United States. The idea of a gun-free zone would appear a logical solution to prevent or reduce incidents of gun violence. However, Taylor (2013) noted, "If you

make it against the law to have guns in parks [or other gun-free zones], the only people in your parks [or other gun-free zones] with guns will be lawbreakers" (p. 55).

A problem exists relating to current gun control policies, specifically the evidence surrounding using gun-free zones, as well as the public perception of their use. If one could show that gun-free zones do not reduce gun violence, or these actually increase the likelihood of an active shooter incident, then gun-free zones should be comprehensively analyzed. In a like manner, if gun-free zones use were shown reduce acts of gun violence, then leaders should expand using these zones. Additionally, public opinion concerning gun-free zones constituted a dynamic that should also be factored into the discussion. Efforts should ensure that public opinion correlated to the empirical evidence, especially on such a controversial issue. Therefore, citizens should be educated on the facts surrounding individual gun policies, specifically using gun-free zones. If the perceptions of citizens were not in line with the empirical evidence, then efforts should be made to change their perceptions. Citizens elect politicians; therefore, the attitudes and feelings of citizens should be based on factual information, and their opinions should hold a significant value to policy makers.

Purpose of the Study

The purpose of this study was to explore citizens' perceptions about gun control policies, specifically about using gun-free zones, who resided in the five states where the single deadliest incidents of mass shootings in U.S. history to date have occurred. These states, in descending order of highest rates of gun violence per capita are: Virginia, Florida, Texas, Nevada, and Connecticut. To contribute to the existing knowledge relating to gun control policy, this research project had one major goal: to gauge the

attitudes and perceptions of citizens relating to using gun control policies, specifically using gun-free zones. To ascertain this information, the researcher sought out the following objectives:

1. Assess the impact of gun control measures, particularly using gun-free zones, on the perceptions of risk and security that residents maintain within an assigned jurisdiction.

2. Ascertain the perceptions that residents have regarding known pro-gun areas, where responsible citizens could legally carry firearms, as well as determine whether gun-free zones influenced their likelihood of visiting a prescribed location.

3. Understand resident perceptions regarding using gun-free zones pertaining to the impact on reducing incidents of mass shootings.

4. Compare the perceptions of citizens with the statistical data on incidents of mass shootings and determine whether the perceptions correlated to reality.

Barriers and Issues

There were several potential barriers to the study that should be noted. One included that responses were collected electronically, which prevented face-to-face interviews. Personal interviews were extremely beneficial for the study because background information and empirical evidence could be presented to respondents during the course of the interview. The researcher sought to provide as much information as possible in an electronic format, but the lack of face-to-face interviews did present a known barrier.

Another barrier to the study related to the understanding of the general public regarding gun policies. Many citizens might not be aware of specific gun policies or the

empirical evidence surrounding using these policies. The media has a tremendous influence on the general public and commonly support a strong stance of gun control through their broadcasting. Unfortunately, the media does not always rely on the empirical evidence and often derives from public emotion and *hot button* issues. This aspect might influence respondents if they were uneducated on gun control policies, which could cultivate a high number of responses in favor of strict gun control policies. In a similar fashion, staunch pro-gun advocates might not be willing to recognize the validity of empirical evidence and allow their own cultural opinions to override the factual information relating to the issue. The researcher attempted to mitigate both of these issues by providing as much education as possible on the issues and ensuring that respondents fully understood the survey questions, as well as the information requested.

Definition of Terms

The following definitions are related to terms used throughout the dissertation.

Active shooter. An active shooter is an offender who aggressively uses a firearm to attack one or more people at a specific location, and often seeks to kill as many victims as possible. These events frequently occur in public locations, such as schools, office buildings, or government establishments.

Gun control. Gun control refers to measures in place, through legislation and regulation, which limit or hinder the ability of individual citizens to own and sell firearms. The first and most notable piece of legislation that enacted a measure of gun control was the National Firearms Act of 1934, "which placed severe limitations on individuals who wished to own small arms and accessories that were generally assumed to facilitate violent crime" (Shally-Jensen, 2011, p. 507). Leaders have passed subsequent

legislation on multiple levels of government to restrict the rights of individual citizens and their freedom to purchase and sell firearms.

Gun control position. The political position that the Second Amendment of the United States was intended to allow for the arming of only a well-regulated militia and not individual citizens. People of this opinion have also considered the National Guard and U.S. Military as meeting the definition of a well-regulated militia in contrast to an armed populace.

Gun-free zone. A gun-free zone is generally understood as a local ban on the possession of firearms. These local bans may be geographical in nature (e.g., property under the control of the federal government, a state, or local jurisdiction), or these bans can be isolated to a particular establishment, such as a movie theater or a commercial business establishment (i.e., grocery stores, department stores, office space, etc.). The overwhelming majority of federal lands and state parks are labeled gun-free zones and do not allow private citizens to carry firearms when physically located on the property.

This researcher noted a distinction between mandatory gun-free zones and voluntary gun-free zones. Mandatory gun-free zones include areas that have physical security inspections of individuals entering the area, such as airports, many government buildings, many professional sporting events, and most courthouses. Voluntary gun-free zones are those locations where the law forbids the carrying of a firearm into the area; however, there are no physical inspections to ensure that weapons are not brought into the area. Examples of voluntary gun-free zones include banks, places of worship, most schools and universities, and private establishments (businesses or restaurants) that forbid the carrying of firearms on their premises by visibly posting signs. Because, individuals

must voluntarily choose not to bring weapons into the area with the knowledge that they will violate the law if a weapon is discovered on their person while inside the location or geographical area. For the purposes of this study the term gun-free zone referred to voluntary gun-free zones.

Mass shooting incident. Mass shooting incident refers to an incident involving an active shooter that directly results in the deaths of at least three victims.

Pro-gun position. Pro-gun position refers to one's political position that the Second Amendment of the U. S. Constitution provides a guaranteed right for individual citizens to keep and bear arms without infringement. People of this position have indicated that the intent of the Second Amendment's mention of a well-regulated militia was to arm the general populace, as well as governmental bodies, such as the National Guard and U.S. Military (Shally-Jensen, 2011, p. 505).

Summary

This chapter included a brief review of existing gun control strategies, specifically information related to using gun-free zones. This chapter also included the problem statement used to found the research of this dissertation, including the goal of the dissertation, the relevance of the study, barriers, limitations, and a definition of terms. The following chapter contains a detailed review of the existing literature pertaining to gun violence, gun control policies, gun-free zones, and incidents of mass shooting. The third chapter includes the methodology utilized to collect data for this study, including variables, mitigating factors, and analyses. Chapter 4 presents the results of analyses. Chapter 5 entails a discussion of the results, including the influence of the study on future policy decisions relating to gun control. Chapter 5 also provides suggestions for future

research and recommendations for expanding upon the information obtained through this study. Finally, a bibliography is provided, as well as supplemental information for further understanding of the data presented in this study.

Chapter 2: Literature Review

Theoretical Foundations

There was not a substantial amount of information available that related to any theoretical foundation for gun control policies. In support of this conclusion, Hoskin (2001) argued no general theory related guns and violence; although, he explained that many scholars have hypothesized "a general way of thinking about guns by conceptualizing them in terms of power" (p. 571). As previously mentioned, some scholars have argued that a correlation exists between gun availability and violence; however, Altheimer and Boswell (2012) contended, "No dominant theoretical perspective exists that explains the relationship between gun ownership and homicide" (p. 684). Still, many liberal scholars have maintained the idea that more control of guns will equate to less violence. In light of this argument, the statistical data does not seem to support this notion; in many situations, the data has indicated that less control equates to fewer incidents of gun violence (Altheimer & Boswell, 2012). Additionally, as claimed by Wolfgang (1958), homicidal offenders are generally persistent with their goals; moreover, if a firearm were not available, then an offender would find another type of weapon to accomplish the task. Consequently, researchers have struggled to acknowledge completely any one pervasive theory related to any connection that may or may not exist between the availability of guns and violence.

Synthesis

Gun violence. Regardless of any theoretical foundation, the statistical information has indicated that violence is a serious problem, both in the United States and across the world. To concur with this conclusion, in 1996, the Forty-Ninth World Health

Assembly declared violence "a major and growing public health problem across the world" (Krug, Dahlberg, Mercy, Zwi, & Lozano, 2002, p. 15). Additionally, Valenti, Ormhaug, Mtonga, and Loretz (2007) agreed with this assessment; they noted violence was responsible for over one million deaths per year, along with many who were wounded by violence each year. Valenti et al. continued by explaining that violence was the leading cause of death for people ranging from 15 to 44 years old. This conclusion also indicated support in the United States, where deaths related to violence have averaged approximately 16,000 per year from 2002 to 2011 (Smith & Cooper, 2013).

One particular type of violence included gun violence. Valenti et al. (2007) contended, "Weapons have an intimate relationship to violence," and guns exponentially increased the destructive force and certainty of lethality (p. 390). This finding coincided with the statistics of violence in the United States, with approximately two-thirds of all homicides in the United States involving using a firearm (Smith & Cooper, 2013). Furthermore, approximately 30,000 gun deaths have occurred annually in the United States, including homicides, suicides, and accidental deaths (Helmke, 2013). This issue was so serious that Valenti et al. (2007) argued that gun violence should be considered a "health problem" from a public health standpoint (p. 389). In concurrence with this opinion, numerous scholars have noted that in the United States firearms have a close relationship to incidents of violence and can pose a threat to the safety and welfare of the general public (Leshner, Atevogt, Lee, McCoy, & Kelley, 2013). Still, one should recognize this did not mean that guns caused violence. Rather, these are tools that are closely associated with lethal violence.

Although many scholars have supported the idea that a strong correlation exists

between firearms and violence, the existing research has indicated conflicting information relating to the availability of firearms and homicide rates (Altheimer & Boswell, 2012). In line with this fact, Altheimer and Boswell (2012) explained that, contrary to popular belief, guns do not cause violent crime. Still, researchers have not revealed on a cross-national level that a strong correlation exists between gun availability and violent crime, specifically homicide (Hemenway & Miller, 2000; Hemenway, Shinoda-Tagawa, & Miller, 2002). However, Carter (2000) contended the statistical evidence related to guns and violence could often be skewed in one direction or another, based on perspective, and information was not always presented in an authentic manner. For example, Carter noted that even if all of the firearm statistics were removed, the United States still had the highest rate of homicide when compared to other industrialized countries. This statistic would maintain that any association between guns and violence should be minimized because violence should more appropriately be associated with people groups (or countries), rather than the tool via which the violence occurred. Therefore, any consumer of research should understand and analyze all the available information before reaching a conclusion regarding the impact of firearms on violence. The below information is provided as a summary of the existing information related to gun violence in the United States.

Hoskin (2001) studied the relationship that existed between firearm availability and homicide rates on a national level. Hoskin (2001) affirmed that although the murder rate in the United States declined in recent years, it remained nearly four times higher than the rate of any other industrialized nation. Many scholars have inaccurately uses this statistic to associate the availability of firearms with acts of violence. Another common

misconception is that lethal violence is directly associated with poverty. Contrary to this opinion, Hoskin explained that homicide rates in the majority of poor countries were actually lower compared to homicide rates in the United States. Hoskin advised that the public placed the blame on issues, such as violence portrayed in the media, familial breakdowns, and illicit drug trafficking. However, diverging from this conclusion, many scholars have argued that access to firearms is the primary reason for the high rates of violence in the United States.

Due to the discrepancies noted above, Hoskin (2001) provided valuable insight into this problem. Hoskin (2001) concluded, "Lethal violence is likely to be high in countries with greater supplies of privately owned guns" (p. 587). Hoskin (2001) added that countries that were ethnically heterogeneous and contributed little to welfare had the highest levels of homicide rates. Thus, based on this study, the availability of firearms increased the likelihood that a firearm would be used in an act of violence. This assertion appeared to contrast with the conclusion of Wolfgang (1958), when he argued that firearms did not impact homicide rates. When examining the available information, there was a distinct lack of empirical evidence related to gun violence; in many instances, researchers have based conclusions on their own position related to gun control, rather than the statistical information available on the topic. This researcher attempted to add statistical data to this topic for the purposes of making sound conclusions and policy decisions regarding using specific gun control measures, such as gun-free zones.

One thing that Hoskin (2001) did not consider was the existing gun control measures in place in the United States. One should understand whether current gun control measures, intended to reduce violence, have succeeded or whether these have

increased acts of violence. The premise behind this argument was grounded in the fact that gun control laws only influenced law-abiding citizens. Criminal offenders have little regard for existing gun control policies and might consider these a benefit to aid their ability to commit crimes. The hypothesis for this conclusion was grounded on the idea that criminal offenders were aware of existing gun control measures, such as using gun-free zones. Moreover, they might have considered those geographic locations prime targets where they knew they would encounter little resistance from any law-abiding citizens carrying firearms who might be in the area. This concept will be explored in more detail later in the study.

Another interesting aspect to this discussion is the fact that both sides of the gun control debate use the same statistics (Carter, 2000). Still, Carter (2000) affirmed two facts that one could not dispute: (a) Gun control laws in the United States were not as strict as other industrialized countries, and (b) the level of gun violence in the United States was higher compared to other countries of similar economical status. These last two points were based on empirical statistical information; however, Carter (2000) also explained that even when all firearm related homicides were removed, the United States *still* had a higher rate of murder compared to other countries of similar economic status. This finding aligned with the precept advanced by Wolfgang (1958).

Still, in light of the existing evidence on gun related violence, one must note that the statistics have indicated a connection between gun prevalence and murder rates. Carter (2000) supported this supposition by noting that in countries with high levels of gun ownership, murder rates were statistically higher. Based on this statistic, firearm ownership indicated a correlation to violence. However, as previously mentioned, these

statistics did include the impact that gun control laws could have on increasing or decreasing the likelihood of violence.

Gun control policy. As the above data has indicated (Carter, 2000), gun violence is a pandemic problem in the United States; therefore, policy makers must make difficult decisions regarding this issue. The primary method via which legislators have attempted to prevent acts of gun violence and keep firearms out of the hands of criminals in the United States is through enacting gun control policies (Jacobs & Potter, 1995). To clarify this idea of gun control further, Stark (2001) described gun control as "an umbrella term to cover a variety of regulations that dictate what types of guns can be owned by which citizens under what conditions" (p. 25). Thus, the chief goal of gun control polies are to enact regulations to restrict who can own and carry firearms.

Based on this idea, gun control policies are quite controversial for numerous reasons. The main reason that gun control measures are so controversial is due to the explicit protections that are provided in the U. S. Constitution regarding the right to keep and bear arms by law-abiding citizens. The Second Amendment of the U. S. Constitution specifically 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, para. 2). This aspect guarantees that citizens have an absolute right to keep and bear arms. Therefore, gun control policies have been a major political issue in the United States since the amendment's inception (Glantz & Annas, 2009).

A second reason that gun control measures are controversial is because, as noted above, the impact of gun control laws on reducing or increasing gun related violence has not been accurately determined. This issue is based on ways evidence surrounding

specific gun control policies does not always reveal whether these are effective at reducing incidents of gun violence. For this reason, further research was needed to analyze the influence of gun control policies on violent crime. If existing gun control policies do not have any measurable influence on gun related violence, then these should be abandoned, and leaders should develop new methods for decreasing gun violence. This opinion coincided with Cook and Ludwig (2003), who argued, "The pragmatic goal of our labors in the consequentialist realm of empirical research has been to determine what works and at what cost" (p. 1329).

In light of the protections provided by the U.S. Constitution, policy makers have placed efforts to limit those who can own a firearm or carry it outside their place of abode. For instance, Beale (2002) noted that the U.S. Congress "has repeatedly increased the penalties for illegal gun possession and using guns in the commission of other crimes" (p. 1641). Stell (2004) contended that these increases in gun control measures coincided with the ideas of many liberal scholars who argued that increasing gun control measures would marginally reduce homicide rates. In a similar fashion, Jasper (2013) contended that a major emphasis of President Barack Obama's gun control policy was "aimed at enacting more legislation and implementing more regulation through executive orders that would further restrict the rights of American citizens to keep and bear arms" (p. 10). Jasper (2013) continued by asserting that the United States already had laws to prevent violent crimes, and restrict firearm ownership and use. However, what many gun control advocates have neglected to recognize is these same laws restrict the ability of law-abiding citizens to protect themselves. This concept will be fully explored and advanced as part of this study.

To understand any discussion on gun control policy, one must first analyze the history of gun control policy in the United States dating back to the time the federal restrictions on firearms became prevalent, which was the National Firearms Act of 1934 (26 U.S.C. § 53). According to Schildkraut and Hernandez (2014), this act targeted machine guns, rifles, silencers, and short-barreled shotguns used by gangsters. The National Firearms Act (1934) required individual buyers, for the first time, to fill out paperwork when purchasing a firearm and receive approval from the U.S. Department of Treasury. Later, in 1938 the Federal Firearms Act (15 U.S.C. §§ 901-909) was implemented. Leaders created this act to regulate interstate commerce and provide the stipulations for licensing of dealers and manufactures for the building and selling of firearms (Schildkraut & Hernandez, 2014).

Many years later, in 1963, there was a renewed interest in gun control laws as a direct result of the John F. Kennedy assassination (Schildkraut & Hernandez, 2014). This led to the Gun Control Act of 1968 (18 U.S.C. § 44), which banned the sale of rifles and shotguns via mail order. The Gun Control Act (1968) also added restrictions on persons who were allowed to purchase a firearm, namely a ban on previously convicted felons, mentally incompetent individuals, and individuals who used drugs (Schildkraut & Hernandez, 2014). Later, in an effort to ease some of the restrictions imputed from the Gun Control Act, the Firearms Owner's Protection Act of 1986 (18 U.S.C. § 921) was created.

Jasper (2013) proposed that gun control laws restricted the ability of law-abiding citizens, rather than limited offenders. To support this contention, Jasper examined several key facts related to the Sandy Hook shooting in Connecticut. First, the shooter

stole the weapons that he used, which was illegal. Second, the shooter was under the influence of psychotic drugs at the time of the shooting, which was illegal. Third, the shooter illegally transported the guns while loaded. Fourth, the shooter illegally entered school premises with the guns. Fifth, the shooter discharged the firearms within the city limits, which was illegal. Sixth, the shooter murdered 26 people, which was illegal. Finally, the shooter committed suicide, which was also illegal. Thus, the offender broke multiple existing laws in the process of committing the tragedy (Jasper, 2013). Therefore, researchers have struggled to understand ways additional gun control measures would have any impact on an offender who is intent on breaking the law.

To elaborate the existing laws related to gun control, Jacobs and Potter (1995) highlighted several provisions, such as the Gun Control Act of 1968 (1994; 18 U.S.C. §§ 921-922), and a law commonly referred to as the Brady Law (1993). When considering the Gun Control Act of 1968, Jacobs and Potter (1995) explained that it was already against the law for an ex-felon to possess a firearm, as well as drug users, mental patients (including former), and illegal aliens. Specifically, the law prohibits the sale of rifles, shotguns, and handguns to anyone who is not a resident of the state in which they are trying to make a purchase, or anyone under the age of 18 for rifle and shotgun purchases and 21 for handgun purchases. Additionally, the law prohibits the sale of a firearm to anyone who has been convicted (or is currently being charged with) of a crime that is punishable by more than one year in prison, a fugitive from justice, or someone who is an illicit drug user or has been declared mentally unstable (Jacobs & Potter, 1995).

Leaders of the Brady Law (1993) have sought to increase the control of the Gun Control Act of 1968 further by ensuring that transfers of weapons do not occur in a

manner that would allow a prohibited person from obtaining a firearm (Jacobs & Potter, 1995). The Brady Law requires that federal firearm licensees conduct background checks on all handgun sales, which may include not transferring the firearm for up to five business days or until a favorable background check is returned (Jacobs & Potter, 1995). Thus, existing gun control policies have been and are in place to restrict the sale of firearms to ineligible persons.

Still, while all the above-mentioned measures have been intended to restrict who may own a firearm, the U.S. Supreme Court has consistently affirmed that the Second Amendment of the U.S. Constitution protects an individual's right to keep and bear arms. Specifically, in *District of Columbia v. Heller* (2008), the court ruled that the Second Amendment allows an individual to possess a loaded firearm for the purposes of self-defense (as cited in Hetzner, 2011). This ruling seems to contrast using gun-free zones because these prohibit one from carrying firearms for any reason within the confines of prescribed zones or geographical areas. Therefore, one should fully understand why gun-free zones were initially created and the premise behind their use.

Gun-free zones. Gun-free zone refers to voluntary gun-free zones, and the focus does not include mandatory gun-free zones that physically screen individuals entering an area. In an effort to prevent gun violence and mass shootings, the U.S. Congress passed the Gun-free School Act in 1990, which initially only targeted schools. However, in 1995, the U.S. Supreme Court ruled on the case of the *United States v. Lopez* that the act was unconstitutional (514 U.S. 549, 1995). Then Attorney General Janet Reno proposed amendments to the law that would make it legal under the ruling of the Supreme Court; therefore, the act was reinstated based on the new provisions when President William

Clinton signed the law in 1996 (Safra, 2000). This law laid the foundation for using gun-free zones to control firearms, and nearly all states followed this path and enacted similar laws to prohibit one from carrying firearms in certain predefined geographical locations.

Researchers have debated gun-free zones in recent years. Most have agreed that a total ban on guns would be unconstitutional; however, localized bans, such as gun-free zones, have appeared to withstand the constraints of the U.S. Constitution and allow the government to restrict the carrying of firearms in certain areas. The underlying concept of gun-free zones is that these are "intended to provide a safe environment for individuals without the possibility of firearms being brought into the area and displayed, discharged or used for any purpose" (Lenn, 2014, p. 1). The rationale for the constitutionality of this position, as noted by Desmond (2008), rests on the idea that carrying firearms at certain times at certain locations does not assist with one maintaining a well-regulated militia; therefore, based on that premise, it is not a violation of the U.S. Constitution to limit this right. Regardless of whether this perspective is flawed, using gun-free zones has been accepted across the United States. With few exceptions, nearly all schools, banks, and government buildings are classified as gun-free zones.

As previously mentioned, the philosophy behind using a gun-free zone is that it prevents anyone except for law enforcement officers from legally carrying a firearm within the confines of that zone; consequently, there should be no instances of gun-related violence within that area. However, as Kopel (2009) explained regarding using gun-free zones, "absolute bans have proven to be extremely dangerous because they turn schools into uniquely attractive targets for mass murderers" (p. 2). This explanation coincides with the overwhelmingly high percentage of mass shootings that occur within

the confines of a gun-free zone (Lenn, 2014).

Mass shooter incidents. When discussing mass shooting incidents, one must first have an understanding of exactly what a mass shooting is and what it is not (Lemieux, 2014). For example, a distinction is drawn between *public mass killing* and *spree killing* (Lemieux, 2014, 75). The major differentiation between these two types of killing is that public mass shootings occur within a single geographical location during one localized event; whereas, spree killing involves one or more murderers killing in different geographical locations without a cooling off period (Lemieux, 2014). For the purposes of this review, the 12 deadliest mass shootings in U.S. history were covered, dating back to 1966. Special emphasis was placed on the locations of these attacks, including whether these were within the confines of a gun-free zone.

Deadliest Mass Shooting Incidents in U.S. history

Las Vegas, Nevada. The deadliest mass-shooting incident in U.S. history recently occurred in Las Vegas, NV. On October 1, 2017, a shooter, later identified as Stephen Paddock, opened fire on a Country Music Festival that was adjacent to the Mandalay Bay hotel, ultimately killing 59 people (including the shooter; Levenson, 2017). There was much speculation regarding this incident; however, Levenson (2017) confirmed Paddock purchased 33 firearms over an 11-month period prior to the day of the shooting. Paddock rented a room on the 32nd floor from the Mandalay Bay on September 28, 2017 and prepared for the shooting for several days. Hotel staff noted that Paddock brought approximately 10 suitcases to his suite, which were later identified as containing 23 different weapons, mostly rifles equipped with scopes. Paddock also set up cameras in his hotel room, most likely to alert him of anyone's presence who could interfere with his

actions (Levenson, 2017).

On the day of the shooting, October 1, 2017, Paddock opened fire on the approximately 22,000 bystanders at a Country Music Festival that was occurring that morning (Levenson, 2017). Paddock continued firing shots into the crowd and at police officers for approximately 1 hour and 5 minutes before police finally entered his room by force. After entering the hotel room, the authorities discovered that Paddock was dead from what appeared to be a self-inflicted gunshot wound (Levenson, 2017). The motives and intentions of Paddock remained unknown and would most likely never be discovered. The Mandalay Bay hotel was considered a gun-free zone; however, Paddock used primarily long guns (i.e., rifles), which would negate the impact of any gun-free zone restrictions. Using gun-free zones was primarily to prevent individuals from carrying handguns into certain geographical locations.

Orlando, Florida. The second most deadly mass-shooting in U.S. history occurred inside Pulse nightclub in Orlando, FL. On June 12, 2016, Saddiqui Mateen entered Pulse and opened fire, killing 49 people and wounded many others (Utter & Spitzer, 2016). The weapons that Mateen utilized included an AR-15 style assault rifle, along with a single handgun. Both of these weapons had been purchased legally at a local gun store (Utter & Spitzer, 2016). Mateen identified himself as being allegiant to the Islamic State, thus declaring that the shooting was an active terrorist attack. Further investigation by the Federal Bureau of Investigation (2017) also revealed that Mateen might have terrorist ties (Utter & Spitzer, 2016).

Mateen did not have a concealed weapon permit to carry a concealed weapon in Florida State; although, even if he was issued a concealed weapon permit, he still would

have been illegally carrying a firearm inside of an alcohol serving establishment (Utter & Spitzer, 2016). The Florida Statues section 790.6(12) prevents the carrying of a firearm inside of an alcohol serving establishment, regardless of whether a person was issued a concealed weapon permit. Therefore, Mateen was illegally carrying his firearms inside the confines of a gun-free zone (Utter & Spitzer, 2016). In this instance, using a "controlled" gun-free zone did not have any impact on protecting the citizens that were present in the club on the morning of June 12, 2016 (Utter & Spitzer, 2016).

Virginia Tech. The third deadliest mass-shooting incident in U.S. history occurred on April 16, 2007 in Blacksburg, VA when a student at Virginia Polytechnic Institute and State University (Virginia Tech) went on a shooting spree, killing 32 people before taking his own life (Hong, Cho, & Lee, 2010). In addition to the 33 dead, several other people were severely injured during the attack. In this instance, the attacker was a 23-year-old student at Virginia Tech, later identified as Seung-Hui Cho (Hong et al., 2010). Prior to the above mentioned Las Vegas shooting, many have argued this particular incident was the "worst school shooting in American history" (Hong et al., 2010, p. 562). Based on the number of fatalities involved, this assumption was correct. This shooting predicated numerous debates on the cause of mass shootings and why attackers often gravitated toward institutions of higher learning (Hong et al., 2010).

Cho did not fit the standard demographic associated with the majority of school shooting incidents (suburban White males). Rather, Cho was an immigrant from South Korea. The motivation behind Cho's attack may never be fully understood; however, he articulated a sense of resentment toward the school because of what he perceived as mistreatment (Hong et al., 2010). Many scholars have also speculated that Cho suffered

from mental instability (McGinty, Webster, & Barry, 2013). There has also been a considerable amount of deliberation concerning what could have been done to prevent such an attack. One measure that was analyzed was the type of laws that were in existence in Virginia State concerning gun control, as well as any specific laws that were in place at Virginia Tech. Regarding gun control laws unique to Virginia Tech, the university leaders had a strict ban that prevented the possession of firearms on campus (Davies, 2008). The ban that was in place at Virginia Tech was more restrictive compared to the state law; the university leaders requested the ban, which state leaders approved years prior to the incident (Davies, 2008). Based on this information, the gun-free zone that was instituted at Virginia Tech was unsuccessful at stopping the third most deadly shooting (and deadliest school shooting) in U.S. history.

Sandy Hook Elementary. The fourth deadliest mass-shooting incident is perhaps even more horrific because it included elementary age school children as some of the victims. A total of 28 deaths resulted in this tragedy. A lone attacker, Adam Lanza, entered Sandy Hook Elementary School in Newtown, Connecticut on December 14, 2012, and he opened fire on a multitude of victims before ending his own life (Schildkraut & Muschert, 2014). The victims of this tragedy included 20 children and six adults who were staff members at the school, as well as the attacker himself who committed suicide. Further investigation revealed that Lanza had also killed his mother, though that murder was not directly connected to the shooting at Sandy Hook Elementary (considering this was a separate event at a later time). As with the Virginia Tech shooting, one could not identify the specific motive that Lanza had in mind when he entered the school and began his massacre. As with the Virginia Tech shooting, the

existing evidence has indicted that Lanza suffered from some form of mental instability (McGinty et al., 2013).

Many gun control advocates have attempted to use the Sandy Hook incident as a platform for advancing gun control measures. However, numerous existing gun laws were broken in the commission of the crime. For example, the attacker illegally stole, from his mother, the weapons that were used in the attack. Additionally, Lanza illegally broke into the elementary school and carried firearms onto school property. As with all other elementary schools in the United States, the Gun-free School Zone Act labeled Sandy Hook Elementary a gun-free zone. Thus, in a similar fashion to the Virginia Tech shooting, a gun-free zone was in effect at Sandy Hook Elementary School. Unfortunately, the ban on firearms did little to prevent the massacre of innocent children and adults.

Sutherland Springs, Texas. The fifth deadliest mass-shooting in U.S. history occurred at a First Baptist Church in Sutherland Springs, Texas on November 5, 2017. This massacre resulted in the deaths of 26 people, including an unborn child, along with an additional 20 who were injured. The suspect, Devin Patrick Kelley, was a former U.S. Air Force veteran who had been court martialed in 2012 for domestic violence charges, and subsequently received a "bad conduct" discharge in 2014 (Yan, Stapleton, & Simon, 2017). Kelley should not have legally been able to purchase a firearm; therefore, he was illegally in possession of the weapons that he used to commit the crime. Based on the available information, Kelley had a domestic dispute with his mother-in-law, who attended the church where the shooting occurred. Media have believed that Kelley entered the church with the intentions of hurting his family members, along with innocent bystanders located within the church (Yan et al., 2017).

Witnesses advised that Kelley entered the church and began shooting the victims with an AR-15 military style rifle, and he subsequently left the church unharmed (Montgomery, Mele, & Fernandez, 2017). After leaving the church, Kelley was confronted by an armed law-abiding citizen, Stephen Willeford, who opened fire on Kelley, injuring him before he fled. Kelley subsequently entered his vehicle, where he later expired due to the injuries sustained because of his confrontation with Willeford. This situation indicated the positive aspect of law-abiding citizens utilizing their constitutional rights to carry a firearm.

Killeen, Texas. The sixth deadliest mass-shooting incident in the history of the United States occurred on October 16, 1991, in Killeen, Texas at Luby's Cafeteria. This tragedy involved an attacker, George Hennard, who crashed his pickup truck into Luby's Cafeteria and opened fire on the innocent victims within the cafeteria (Bilski, 1991). Hennard managed to shoot 23 victims fatally and injure 50 more before entering a gun fight with police officers. After encountering the police officers, Hennard fled into a nearby bathroom, where he committed suicide. As with many mass-shooting incidents, the motives behind the attack might never be fully understood; however, much deliberation has considered that Hennard fostered a hatred for women that spurred the attack. This proposition was supported by supposed statements made by Hennard during the attack, which coincided with the majority of Hennard's victims being women (Chin, 1991).

At the time of this incident in 1991, Texas did not have a plethora of gun control laws prohibiting the purchase or carrying of firearms in public. However, Luby's Cafeteria was an establishment that served alcohol; consequently, it was a presumed gun-

free zone. Due in part to this massacre, in 1995, Texas lawmakers passed a "shall-issue" law related to concealed carry licenses (Violence Policy Center, 2002). This law requires all applicants who meet predetermined requirements to be issued a concealed weapon permit and removes the authority of local representatives to deny such a request. Once again, even though Luby's Cafeteria was a presumed gun-free zone, it did nothing to prevent the crime from occurring. This shooting was the deadliest in U.S. history until the Virginia Tech shooting in 2007.

San Ysidro, California. The seventh deadliest mass-shooting event occurred in a McDonalds in San Ysidro, California on July 18, 1984. The attacker, James Huberty, entered the establishment and brutally killed 21 people (adults and children), along with injuring 19 others with a pump-action shotgun, pistol, and hunting rifle before police snipers could neutralize Huberty with a fatal shot (Salva-Ramirez, 1995). One could not solve the motives that drove Huberty; however, Murphy (1993) argued Huberty was on a mission to hunt humans. This, again, would coincide with the consensus regarding mass shooting attackers that the overwhelming majority appear to have suffered from some form of mental illness. The precise location of the McDonald's in San Ysidro, California was not classified as a gun-free zone; however, California Penal Code § 25850 prohibits the carrying of a loaded firearm in public. Therefore, for the purposes of this study, this incident was classified as occurring within the confines of a gun-free zone.

University of Texas. On August 1, 1966, the eighth deadliest mass shooting incident occurred at the University of Texas. Charles Whitman ascended to the top of the University of Texas Tower and opened fire on an area that spanned five city blocks (Colloff, 2006). This tragedy ended with 17 deaths (two of whom were Whitman's

mother and father) and more than 30 others wounded from the attack (Flippin, 2007). The massacre ended when an Austin police officer, Houston McCoy, stormed the tower and killed Whitman (Flippin, 2007). During the autopsy of Whitman, officials discovered that he suffered from a brain tumor (Lavergne, 2007). Many believed the tumor was what caused Whitman to lose control of himself that day and open fire on innocent bystanders (Lavergne, 2007).

This shooting occurred prior to the passing of the Gun-free School Zone Act; therefore, students were permitted to have weapons on campus at the time of the incident. Remarkably enough, this may have been what allowed McCoy to end the rampage. Many reports have noted that when the shooting began, numerous students on campus began fetching their own hunting rifles from their vehicles and returned fire on Whitman in the tower. This distraction is most likely what allowed McCoy to storm the tower, along with three other police officers, and subsequently shoot Whitman (Brown, 2006). If the University of Texas were a gun-free zone, as it is today, this would not have been possible.

San Bernardino, California. The ninth deadliest mass-shooting in U.S. history occurred in San Bernardino, California, on December 2, 2015. There were two shooters involved, identified as Syed Rizwan Farook and Tashfeen Malik, who were married (Calamur, Koren, & Ford, 2015). Evidence has indicated that Farook attended a local Mosque prior to the shooting, where he allegedly discussed Islamic radicalism and acquiring weapons to facilitate the massacre (Serrano, Esquivel, & Knoll, 2015). The couple entered the Inland Regional Center, a social services center in San Bernardino, California, and opened fire on the innocent bystanders who were located inside the

building, killing 14 and injuring an additional 21. The attackers were later confronted by local police, who killed the couple when gunshots were exchanged. California has very strict gun laws, and the social services center would have been classified a gun-free zone.

Edmond, Oklahoma. The tenth deadliest mass-shooting in U.S. history occurred on August 20, 1986, inside a postal facility in Edmond, Oklahoma. The shooter, identified as Patrick Sherrill, was a part-time postal employee himself who had been fired the previous day (Inman, 1986). Distraught over his firing, Sherrill entered the post office on the morning of August 20, 1986 with a leather bag hung over his shoulder containing two .45-caliber pistols and a .22-caliber weapon (Inman, 1986). After entering the post office, Sherrill killed 14 of his fellow postal employees and wounded many others before taking his own life. Sherrill did not purchase the weapons he used for the attack; rather, he was an instructor at the Oklahoma Air National Guard, where he had taken the weapons and ammunition just days before the shooting (Inman, 1986). Regarding the location of the shooting, due to the fact that the post office was a federal building, all weapons were prohibited from the premises. Unfortunately, this did not stop Sherrill from entering the building with multiple weapons and killing so many innocent victims.

Columbine High School. This calamity is an incident that received a considerable amount of media attention and was the cause of debate over gun control issues. On April 20, 1999, the massacre at Columbine High School became the ninth deadliest mass shooting in U.S. history. The attackers, Eric Harris and Dylan Klebold, entered their high school armed with semi-automatic weapons, sawed-off shotguns, and homemade bombs to create as much chaos and carnage as possible. Because of this tragedy, 12 innocent students lost their lives, along with one teacher. Several others were

wounded before Harris and Klebold committed suicide. This act resulted in 15 deaths. There has been much speculation regarding the motives of Harris and Klebold, but some scholars have argued that this attack should be considered terrorism because writings of the attackers appear to send a message of fear and terror to the United States (Altheide, 2009).

One area of contention related to this incident is how the attackers obtained the firearms they used in the attack. Evidence has indicated that a fellow student, Robyn Anderson, purchased three of the four firearms used in the attack and sold these to Harris and Klebold (Luzadder, 1999). This aspect mat have been an illegal purchase by Anderson if her intent was to purchase the weapons and immediately sell these to Harris and Klebold. Based on the evidence, Harris and Klebold illegally purchased the weapons used in the attack. Subsequently, because Columbine High School is classified as a gun-free zone, Harris and Klebold illegally carried the weapons onto school property to commit the crime. As with many other mass shootings, there is no evidence to suggest that additional gun control measures would have had any impact on preventing this tragedy from occurring.

Binghamton, New York. On April 3, 2009, the twelfth deadliest mass-shooting in U.S. history occurred at an immigrant-services center in Binghamton, New York. The shooter, identified as Jiverly Wong, also wounded four victims during the attack before taking his own life, which resulted in 14 deaths (Chuang, 2012). Much speculation has surrounded the motivations of Wong, and sources have noted the infatuation the media had with Wong's race and nationality. Wong was an ethnically born Asian from South Korea, though the evidence has indicated that this had no impact on his motivations for

the attack (Chuang, 2012). This incident is yet another that occurred within the confines of a gun-free zone, yet it did nothing to prevent the tragedy. Additionally, New York is a "may issue" state, meaning that concealed weapon permits do not have to be issued to applicants, and the approval is rare. This law results in a small percentage of the general population that can theoretically defend themselves against an attack of this nature.

Fort Hood, Texas. On November 5, 2009, the thirteenth deadliest mass shooting in U.S. history occurred on Fort Hood, Texas. This incident occurred on a U.S. Military installation and was classified as a terrorist act against the United States. This incident was also unique because the attacker was a U.S. soldier, an officer, who had beliefs and values that differed from those of the military to which he had pledged allegiance.

In November, Nidal Hasan entered the Soldier Readiness Center in Fort Hood and killed 13 people, injuring an additional 29 more (Shepherd, Gerdes, Nipper, & Naul, 2010). This attack was the worst terrorist attack in United States since 9/11 and was the most tragic event to ever occur on a military installation in the United States (Zegart, 2015). The motivation behind the majority of mass killings were not known; however, the objective and inspirations behind Hasan's attack were clear. This conclusion was drawn both from Hasan's actions and statements during the attack, as well as his behavior prior to the attack.

Zegart (2015) explained that Hasan's conversion to a radical Islamic terrorist was not a secret, and many indicators were present that leaders overlooked. One indicator was Hasan's blatant defense of Osama bin Laden and his tactics, including using suicide bombers. Additionally, Hasan was outspoken against the U.S. Military's actions against Islam, and he argued the military would be prone to Islamic soldiers in the U.S. Military

turning against their own troops (Zegart, 2015). Many labeled Hasan a "religious fanatic" prior to his attack on Fort Hood (Zegart, 2015, p. 38). The attack on Fort Hood was the epitome of Hasan fulfilling his deep held beliefs and demonstrating that his true loyalty was to radical Islam.

As with most mass shootings in the United States, the Fort Hood shooting also occurred within the confines of a gun-free zone. U.S. Army Regulation 190-14 prohibits the carrying of personally owned firearms within the confines of a U.S. Army military installation. The regulation also prohibits the carrying of government issued firearms for the purposes of personal protection without credible information that a threat exists against military personnel. However, this regulation did not prevent Hasan from carrying multiple personally owned and loaded firearms onto Fort Hood to commit his tragic attack. This incident is another case where the offender broke multiple existing laws and regulations in the commission of a crime. There is no evidence to suggest that any additional laws would have had any positive impact on the attack.

Wilkes-Barre, Pennsylvania. The fourteenth deadliest mass shooting in the United States occurred in Wilkes-Barre, Pennsylvania on September 25, 1982. The suspect in this case, George Banks, murdered 13 people during the massacre, eight of whom were in his own house (Buynovsky, 2012). The weapon used during this tragedy was a semi-automatic AR-15 military style rifle that Banks had legally obtained.

On the morning of September 25, Banks awoke and killed four of his own children, along with their mothers, before walking out of his house and shooting two more victims who were leaving a house across the street. One of the two bystanders survived the attack, and the other was fatally shot. Banks proceeded to a residence where

his girlfriend lived with another of his children. Banks forcibly entered the residence and killed his girlfriend and his fifth child, along with his girlfriend's 7-year-old nephew (Buynovsky, 2012).

Further investigation determined that Banks was suffering from psychological disorders and that he experienced a variety of hallucinations (Sisak, 2010). These findings were confirmed in court, and the presiding judge ruled that Banks was mentally incompetent and therefore could not be sentenced to death (Sisak, 2010). This tragedy was one of the few mass shootings that did not occur within the confines of a gun-free zone. Additionally, the suspect legally purchased the firearm that was used in the shooting; although, the weapon was purchased at an earlier date before he was diagnosed with any type of mental disorder. Therefore, there was little evidence to indicate that either a gun-free zone or additional laws concerning mental instability would have prevented the tragic crime.

Summary. After analyzing the top 14 deadliest mass-shooting incidents in U.S. history, two major factors seemed consistent. First, the overwhelming majority of mass shootings occurred within the confines of gun-free zones. This information indicated that using gun-free zones as to prevent incidents of mass shooting was not successful. In contrast, the evidence has indicated that using gun-free zones increases the likelihood of a mass shooting or, at a minimum, has no impact. Second, the evidence has indicated that the overwhelming majority of offenders suffered from some form of mental illness. Finally, many of the shooters in these incidents illegally possessed firearms. This finding would lend credence to the philosophy that more gun control laws did not have an influence on reducing acts of gun violence. Based on this information, the overall

effectiveness of gun-free zones, as well as other gun control policies, should be re-examined. Additionally, one should recognize there were already in place an overabundance of existing gun control policies designed to prevent those with mental illness from obtaining a firearm. Again, if the evidence has indicated that existing gun control measures are not effective, then these also should be re-examined to determine if these need to be amended or removed from existing gun control legislation.

Methodology

This section provides a brief overview of the methods utilized to conduct the study and identify the end goals sought through this research, followed by Chapter 3, which includes the data collection methods. The study was descriptive in nature and utilized a nonexperimental cross-sectional design, involving quantitative measurements of data to examine the stated research questions and understand any relationship that existed amongst two or more variables (Creswell, 2014). The researchers used a cross-sectional approach for quantitative data relating to statistical information, as well as a numeric rating of the quantitative data supplied by respondents. Note that Chapter 3 provides full information on the participants, sampling, research design, survey method, strengths and weaknesses of the research design, procedures, ethical considerations, and ways the data were coded and analyzed.

The focus of this study was to establish the perceptions citizens hold relating to gun control policies, specifically using gun-free zones, to determine if any correlations existed between these perceptions and the historical evidence related to using gun-free zones. Therefore, the study was based on a nonexperimental design and was descriptive in nature. This was appropriate because researchers have often used descriptive studies to

discover what people think and ways they act in particular social contexts (Bachman & Schutt, 2011).

The nonexperimental design was appropriate because this researcher did not seek to establish any causal relationships, as explained by Spector (1981). Rather, the researcher aimed to describe how citizens perceived certain gun policies to determine whether these citizen's perceptions of specific gun policies correlated to the historical data pertaining to gun violence incidents. This nonexperimental, mixed-methods approach quantitatively compared the two aforementioned data sets: historical facts related to active shooter incidents and citizen's perceptions related to various gun policies, with a special emphasis on using gun-free zones. These two data sets included nonequivalent groups; therefore, an experimental design was inappropriate.

A nonexperimental design and descriptive approach were used to reveal any correlation between citizen's perceptions of safety and using gun-free zones. Additionally, the researcher compared the perceptions of citizens to the historical data on active shooter and mass murder incidents. The historical data set consisted of statistical information related to the five deadliest shootings in U.S. history, and whether those locations were located within gun-free zones. This information could be used for educational purposes and could foster future research regarding how gun policies were communicated to the general public via the media.

Additionally, some respondents might be biased and might have provided answers based on their own political affiliations or moral beliefs. For this reason, demographic data were also collected and coded to determine if specific demographic groups tended to provide similar answers on survey questionnaires. To offset this potential bias, sampling

was applied to obtain participants representing a broad range of demographic subgroups.

Significance

As noted above, gun violence is a serious issue in the United States that represents what many have argued is a public health crisis. Due to this known problem of gun violence and the recent increase in gun control legislation, this study had significant relevance to the field of criminal justice. This relevance was amplified by advocates of strict gun control measures and those who have staunchly supported the rights of citizens to keep and bear arms debating gun control in the United States. Policy makers are found in the middle of this debate, where they attempt to manage citizen desires, while relying on the empirical evidence to make decisions. Both individual citizens and policy makers can benefit from the information provided in this study because it may gauge the perceptions of citizens regarding using specific gun control policies to understand the influence of the empirical evidence on their opinions.

The goal of all gun control advocates should involve developing policies to decrease the likelihood of gun violence, especially incidents of mass shootings. If it can be shown that using gun-free zones did not provide any measure of security for residents within a jurisdiction, or if the use actually increased the likelihood of a mass shooting incident, then these policies should be re-evaluated. In line with this assertion was that citizens should have a clear understanding of whether gun policies were effective. A clear gap existed in the research concerning the effectiveness of certain gun policies, particularly using gun-free zones. Moreover, future researchers could use the information obtained from this dissertation to understand the influence of the empirical evidence on citizens' perceptions of legislation and policies that were implemented.

As previously mentioned, the major objective of the study was to assess the impact of gun control measures, particularly using gun-free zones, on the perceptions of risk and security that residents maintain within an assigned jurisdiction. This researcher used this goal to gather pertinent information to reflect the overall effectiveness of these types of gun control measures. The researcher also attempted to discover the perceptions that citizens had about known pro-gun areas, where responsible citizens could legally carry firearms. This process included gathering responses to determine whether gun-free zones influenced the likelihood of an individual citizen visiting a prescribed location. Additionally, the researcher sought to understand whether residents had an accurate understanding of the correlation between using gun-free zones and any presumed reduction of incidents of mass shootings.

After reviewing the literature, researchers have not clearly shown an understanding of the success of gun control measures. Additionally, creating new gun control measures might not have much, if any, impact on reducing the incidences of lethal violence. As noted above, if an offender has a strong desire to commit a crime, it does not matter what type of stipulations and laws are in place, the offender will merely break these in the commission of the crime. Moreover, many existing gun control measures appear ineffective at reducing acts of violence. The only individuals who are infringed on by leaders creating new gun control measures are the law-abiding citizens who follow the mandates of the new laws. Based on this premise, future research is needed to identify whether some gun control measures are actually beneficial, or if these may increase the likelihood of gun-related violence.

Research Questions

Therefore, the research questions had two distinct concentrations. One pertained to the perceptions of citizens regarding using specific gun control policies, such as gun-free zones, and their corresponding feelings of relative safety. The other pertained to any correlation between perceptions of the citizenry and empirical evidence of gun violence. Supporting questions addressed associated with demographic characteristics. The research questions were the following:

RQ1: Do residents associate using gun-free zones with feelings of safety or feelings of concern?

RQ2: Do residents believe that gun-free zones reduce gun-related violence and lower the occurrences of mass shooting incidents, and do these perceptions correlate to the empirical evidence related to mass shootings?

Hypotheses

This researcher was not interested in determining whether an association existed between gun availability and homicide rates; rather, this researcher was concerned with whether citizens felt safer with gun control measures in place, specifically gun-free zones, and whether they felt that the existence of gun-free zones could or did reduce the likelihood of a mass-shooting incident. Additionally, the researcher sought to identify whether citizen's perceptions of gun-free zones correlated to the existing data on mass-shooting incidents. Generic hypotheses included the following:

$H1_0$: There is no association between gun-free zones and feelings of safety.

$H1_a$: There is an association between gun-free zones and feeling of safety.

$H2_0$: Participants' perceptions of the relationship between mass shootings and

gun-free zones are not associated with the facts.

$H2_a$: Participants' perceptions of the relationship between mass shootings and gun-free zones are associated with the facts.

To understand citizen's perceptions of gun control measures, such as gun-free zones; their resultant feelings of safety; and the accuracy of their knowledge about the relationship between gun-free zones and mass shootings, the researcher surveyed residents located in the geographical areas that suffered the deadliest active shooter incidents in U.S. history. Participants were characterized by demographic information, including gender, race, political affiliation, and other factors. The researcher also compiled statistical information surrounding the five deadliest mass shooting incidents in the United States, specifically the percentages that occurred inside and outside of gun-free zones. This information was compared to participants' perceptions to see if a correlation existed between the perceptions of citizens and reality.

Chapter 3: Methodology

Participants

The population of interest was comprised of residents from five U.S. states. These states had the five deadliest active shooter incidents. The states included Nevada, Florida, Virginia, Connecticut, and Texas.

Sampling

Participants were sampled with SurveyMonkey Audience® database to generate a stratified random sample. Demographic characteristics were compared to national census statistics obtained from http://www.citidata.com, which largely represented the demographics of the nation (see Chapter 4). Demographic data included gender, ethnicity, age, marital status, number of children, community type, political affiliation, educational attainment, and annual household income. Additional "attitudinal" demographic data with the potential to influence perceptions included personal experience with firearms (e.g., whether the participant owned a gun), knowledge of gun laws, and degree of favoritism of Second Amendment rights. In total, 12 variables had the potential to moderate perceptions of gun-free zones. To identify the minimum number of participants, a statistical subject-to-variable ratio was employed as a type of power analysis, which set the minimum number of participants to 10 participants per predictor variable. The potential moderating variables required a minimal target sample size of 120 participants. This requirement was met (N = 126 participants).

The focus of this study was to document citizens' perceptions of gun control policies, specifically attitudes about using gun-free zones, to determine if any correlations existed between these perceptions and the historical evidence related to mass shootings in

gun-free zones. Therefore, the study was based on a nonexperimental design and was descriptive in nature, which was appropriate. Researchers have often used descriptive studies to discover what people think and how they act in particular social contexts (Bachman & Schutt, 2011).

Survey Methods

All data were transmitted via secure channels, including Secure Sockets Layer encryption. No tracking software was used, and IP address tracking was disabled. SurveyMonkey required using a consent form for each survey, which was included as the first part of the survey (see Appendix A). The informed consent reminded participants they had the option to withdraw from the survey at any time during their participation. Participants who did not agree with the informed consent were restricted from further access to the survey. The SurveyMonkey software also required that the survey allowed for a *no response* or *prefer not to respond* for every question.

Research Design

The design was a nonexperimental, exploratory, descriptive study. The nonexperimental design was appropriate because the researcher aimed to describe ways citizens perceived certain gun policies, with special emphasis on using gun-free zones. The goal was to determine whether citizens' perceptions of using gun-free zones correlated with the historical data pertaining to incidents of gun violence; the study did not seek to establish any causal relationships, as explained by Spector (1981).

Research questions. The research questions had two distinct concentrations. The first research question pertained to citizens' perceptions of using gun control policies, specifically using gun-free zones, and their corresponding feelings of relative safety when

in gun-free zones. The second research question pertained to the association between citizens' understandings of the location of mass shootings inside or outside of gun-free zones and the historical reality. Supporting questions examined associations between perceptions and demographic characteristics. The research questions were the following:

RQ1: Do residents associate using gun-free zones with feelings of safety or feelings of concern?

RQ2: Do residents believe that gun-free zones reduce gun-related violence and lower the occurrences of mass shooting incidents, and do these perceptions correlate to the empirical evidence related to mass shootings?

Hypotheses. This researcher was not interested in determining whether an association existed between gun availability and homicide rates. Instead, this researcher was concerned with whether citizens felt safer with gun-free zones in place, and whether they felt the existence of gun-free zones could or did reduce the likelihood of mass shooting incidents. Additionally, the researcher sought to identify whether citizens' perceptions of gun-free zones correlated with existing data on mass shooting incidents. Specific hypotheses are presented with the results of each analysis in Chapter 4, but generic hypotheses were the following:

$H1_0$: There is no association between gun-free zones and feelings of safety.

$H1_a$: There is an association between gun-free zones and feeling of safety.

$H2_0$: Participants' perceptions of the relationship between mass shootings and gun-free zones are not associated with the facts.

$H2_a$: Participants' perceptions of the relationship between mass shootings and gun-free zones are associated with the facts.

Correlational model. Correlations and regression models were examined to understand the context of perceptions of gun-free zones. Correlational relationships could be bidirectional (i.e., X influences Y and Y influences X), unidirectional (i.e., X influences Y), or exist because of the mutual influence of a third variable (Warner, 2013). Participant perceptions about gun-free zones were conceptualized as influenced by 12 potential moderating variables.

Identification of Variables

The primary variables of interest in RQ1 included participants' perceptions of gun-free zones regarding whether they were in favor of gun-free zones or opposed to gun-free zones, and corresponding feelings of safety and related behaviors. The primary variables of interest in RQ2 included perceptions of gun-free zones regarding the role in reducing mass shootings, and the accuracy of participants' perceptions compared to the facts. Follow-up questions involved examining the role of 9 demographic variables (gender, ethnicity, age, marital status, number of children, community type, political affiliation, educational attainment, and household income) and three attitudinal variables (personal experience with firearms [e.g., whether the participant owned a gun], knowledge of gun laws, and degree of favoritism of Second Amendment rights) in predicting participants' agreement with gun-free zones (i.e., in favor of gun-free zones or opposed to gun-free zones).

Instrument Development

This researcher used the informed consent letter (see Appendix A) and Gun-free Zones Perceptions Survey (see Appendix B). The survey was based on the National Firearm Survey (Miller, 2004). This 2004 survey was an update of one used in an earlier

study by Cook and Ludwig (2003) who examined household firearm ownership in the United States. Both of these surveys were utilized in numerous studies exploring the relationship between firearm ownership and perceptions. Due to the previous use and validation, both of these individual survey instruments were used to develop the instrument, Gun-free Zones Perceptions Survey (see Appendix B), used in this study. Survey designs are an accurate way to understand the characteristics of a prescribed larger population and are the appropriate choice for descriptive research (Lavrakas, 2008; Maxfield & Babbie, 2009).

To ensure content validity and identify any potential problems with the survey, the survey was examined by two experts who were active scholars in the field of criminal justice. They examined the survey and provided constructive feedback, which was incorporated. Subsequently, the survey was piloted by 10 volunteers who provided feedback on the content and clarity of survey items; their feedback was also incorporated to ensure that the survey was clear and understandable. Results from the pilot study were discussed by all of the members of the dissertation committee prior to submission to the Institutional Review Board (IRB).

Procedures

This section includes the methods for collecting data from residents of Nevada, Florida, Virginia, Connecticut, and Texas, which are the states where the five deadliest incidents of mass shootings in U.S. history to date have occurred. The current researcher aimed to understand the characteristics of the population of interest, and a cross-sectional survey design was the most appropriate. A cross-sectional survey is appropriate for determining perceptions, opinions, and beliefs about a certain topic at a specific point in

time (Lavrakas, 2008). The collection of cross-sectional data was also consistent with using self-administered questionnaires, as used in this study.

In the current study, cross-sectional data were collected over a 30-day time frame. This time frame was not expected to influence the study results. The assumption was that time had a random effect on variance (in contrast to true biases; Lavrakas, 2008), unless a mass shooting incident occurred during the sampling period.

The data came from two sources. The first data source was from the Gun-free Zone Perception Survey (see Appendix B), which measured participant perceptions on a range of topics related to the application and impact of gun control measures. These data included responses to a cross-sectional survey collected through an online self-administered survey on SurveyMonkey® during a 30-day period.

The rationale for using a self-administered survey was twofold. First, the researcher used the survey for the convenience of administering the survey to a wide variety of respondents within a particular population. Second, the researcher used an online survey, such as SurveyMonkey®, to maintain confidentiality and anonymity. This aspect increased the likelihood of participation by participants because they were assured their information would not be used for reasons other than the current study. Additionally, the researcher used SurveyMonkey® for an expeditious and efficient method for obtaining the data necessary to complete the study.

The second data source included published historical information concerning the deadliest mass shooting incidents in 2017. These were tabulated from records from the Bureau of Justice Statistics, crime reports, court records, and media reporting. The data identified whether each of the deadliest active shooter incidents in U.S. history was

located within the confines of a gun-free zone. These data were compared to the perceptions of citizens as part of RQ2. Special emphasis was placed on incidents of mass murder, where an active shooter killed three or more individuals during a single incident (see also definitions of terminology in Chapter 1).

Ethical Considerations

The required IRB paperwork was completed in accordance with all Nova Southeastern University (NSU) policies and procedures. The paperwork included the New Protocol Form, consent forms, completed consent checklists, and data collection instrument. The paperwork included information related to the principle investigator, type of proposed study, type of review requested, and type of subjects utilized. The paperwork included a descriptive summary of the research conducted, the significance of the research, the methods utilized, and a description of the participants (http://www.nova.edu/irb/process.html). The study was reviewed and approved by the IRB of NSU for research with human subjects.

The researcher provided informed consent through using the informed consent checklist. This checklist allowed participants to acknowledge that participation in the study was voluntary and advised them of their rights guaranteed by participation. The informed consent statement was clearly displayed as part of the online survey and was listed as part of the instructions for taking the survey. Participant anonymity and confidentiality was protected by identifying each completed survey only by an untraceable case number (via a numerical coding system). All data collected from this study remained in password-protected files on the researcher's personal laptop computer; he was the only person with access to the computer password. Participants were advised

that only summary data would be distributed to the academic community, and no personally identifying information would be released.

Data Analysis

For RQ1 and RQ2, survey data were not positioned as independent or dependent variables per se; instead, these examined descriptive statistics, mainly for associations among variables, via chi-square cross-tabulations and correlations. Analyses for RQ1 also included some group comparisons made with ANOVA tests. Follow-up analyses involved multiple regression to identify variables that predicted perceptions of gun-free zones (opposed to or in favor of). The independent or predictor variables were the 12 demographic and attitudinal variables. The dependent variable or predicted variable was perceptions of gun-free zones (opposed to or in favor of). Brief explanations of the statistical tests used to analyze the data are provided below.

Chi-squares. Chi-square tests were used to evaluate the association between several variables for RQ1. Chi-square tests set up categorical data in cross-tabulated (or contingency) tables; analysis involved differences between observed and expected counts relative to chance expectations, as suggested by researchers (Siegel & Castellan, 1988). *Observed counts* are the actual number of participants in the study who fall into a specific category. *Expected counts* are the number of participants who would be expected to fall into a specific category by chance, in the absence of a relationship between the variables whose association is being evaluated. An overall chi-square statistic indicates whether the distribution of the observed counts differs significantly from the distribution expected by chance. For significant chi-square statistics, individual pairs of observed and expected counts were then inspected for statistical significance by transforming the difference

between these into *z*-scores called *adjusted residuals*. Adjusted residuals that were ±1.96 indicated statistically significant relationships, as suggested by researchers (Siegel & Castellan, 1988). There could not be more than 20% of the cells with expected frequencies of 5 or less; one solution was to collapse categories in theoretically or intuitively reasonable ways to increase the frequencies, as suggested by researchers (Siegel & Castellan, 1988).

Correlations. Correlations were conducted as Pearson product-moment correlations and were interpreted qualitatively following Cohen (1988): small effect $r = .10$; medium effect $r = .30$; large effect $r = .50$. These included zero-order correlations that did not reflect the effects of other associated variables. Correlations also included partial correlations, which reflected the impact of other associated variables by factoring out those effects. Partial correlations were interpreted the same way as Pearson correlations were interpreted. In the current study, the 12 potential variables that predicted agreement with gun-free zones were all correlated to one another to some degree. Therefore, zero-order correlations and partial correlations were generated and compared to determine the extent to which any zero-order correlation was mediated by the effects of other associated variables.

ANOVA tests. Some of the descriptive statistics for RQ1 included ANOVA tests (acronym for analysis of variance). These included a family of tests that compared means across three or more groups to establish whether the groups were similar enough to have been likely sampled from the same population (were nonsignificantly different) or different enough to suggest that at least one of the groups came from a different population compared to the other groups (Weaver & Goldberg, 2011). ANOVA tests

generate an *F* statistic, which was the ratio of the variance between the groups divided by the variance within the groups, was always positive, and close to 1 in value when there was roughly comparable variances between and within the groups. In contrast, higher values of *F* statistics reflected greater differences between at least two of the groups. The size of the impact or "effect" of the independent variable was measured in the current study with an effect size statistic called partial eta squared (*partial* η^2 or $p\eta^2$). Partial eta squared was the amount of variance in the dependent variable that was explained by the independent variable. Partial eta squared values were interpreted categorically as indicative of small (0.01), moderate (0.06), or large effects (0.14). ANOVA tests were followed by planned comparisons Tukey's tests to evaluate the statistical significance of each pair of groups.

Multiple regression. One aim of this included identifying demographic and or attitudinal variables that influenced or helped predict perceptions of gun-free zones. This aim fit with the analytical technique of regression and its two objectives (Hair, Black, Babin, Anderson, & Tatham, 2010). Objective 1 involved *prediction*, referring to regression attempts to predict the change in the dependent (criterion) variable that resulted from changes in one or more independent (predictor) variable(s). Objective 2 involved *explanation*, referring to regression that attempted to allow the researcher to assess the relative contribution or "weight" of each independent variable to the regression equation when there was more than one. Simple regression used one predictor variable to predict one criterion variable. Multiple regression used two or more predictor variables to predict one criterion variable. The current researcher used multiple regression o follow up on results of the two research questions.

Sample size influenced the statistical power and generalizability of multiple regression analyses in that the power to detect statistically significant relationships was compromised by small samples (< 20 participants per each independent variable); only very strong relationships were detected with any degree of certainty in small samples (Hair et al., 2010). Generalizability was also directly affected by the ratio of participants to independent variables; a minimum of 10 participants was needed, although 15 to 20 participants was desirable, for each independent variable. The 126 participants in the current study allowed a maximum of 12 predictor variables to enter the regression analysis to generalize the findings.

To identify the most likely predictor variables, correlation matrices were derived and examined to determine if there were a sufficient number of at least moderately correlated variables for the regression, while avoiding multicollinearity. Multicollinearity was the condition of two or more predictor variables that were strongly correlated, defined as $r = .70$ or greater. Tolerance statistics were also inspected. Tolerance was the proportion of variance in a predictor variable that was not predictable from (shared with) the other *predictor* variables that were already included in the regression (Warner, 2013). The minimum possible tolerance value was zero, which indicated that the predictor variable did not contain any additional variance that was not already present in other predictor variables. Perfect multicollinearity was revealed by a tolerance equal to 0 and indicated that the variable with zero tolerance could not add any new predictive information to the regression. Conversely, the maximum possible value of tolerance was 1, which indicated that the predictor variable was wholly uncorrelated with other predictor variables in the regression. Tolerances that were substantially larger than 0 were

evidence that the predictor variable contained new information that was not already provided by the other predictor variables. Unstandardized regression coefficients (*B*) were used to show the weights of each significant factor (predictor) in the regression. In contrast, the contribution of each significant predictor variable can be seen by comparing beta coefficients (β; Hair et al., 2010).

Format for Presenting Results

The format for presenting results included descriptive statistics, bivariate statistics, and regression statistics. Analysis was completed with SPSS v 25. Significance was set at *alpha* = .05. Percentages were rounded to whole numbers.

Strengths and Weaknesses/Limitations

The primary strength of the study was that the sample was based on a limited geographical area, representing the five states with the worst mass shootings. This aspect provided focused evidence of citizens' perceptions in states that, to date, have been most affected by horrific criminal use of guns. The researcher chose to limit the sample to the five states with the worst mass shootings, making this a delimitation. However, this restriction limited the breadth of generalization to the five sampled states without representing citizens in other states. Future researchers could address this aspect by expanding the current research on citizens' perspectives of guns and guns-free zones with a random sample drawn from a larger geographical area.

A limitation included the researcher's interest in documenting the accuracy of citizens' perceptions of mass shooting incidents relative to the historic data that described these, specifically whether citizens understood the reality of the role of gun-free zones in mass shootings. An associated limitation to the current study was that most of the active

shooters were killed or killed themselves during the course of their attacks. Consequently, they could not provide any explanations of their behavior. Their explanations would be extremely helpful in one attempting to determine, among other things, how active shooters chose their selected targets. The current researcher did not address the question of how shooters choose their targets. However, the topic was critically important to the efforts of law enforcement to anticipate and mitigate or entirely circumvent future mass shootings, and future studies of using gun-free zones should include this topic as possible. Nonetheless, one could develop assertions based on historical information related to active shooters, such as evidence obtained through criminal investigations after the attack, previous statements made by the attackers prior to their deaths, and interviews with associates who knew the offenders prior to their attack.

Resource Requirements

This study required several specific resources, including access to online databases that contained information relating to the five deadliest active shooter incidents in U.S. history, a SurveyMonkey® account, and SPSS Student GradPack for Macintosh. Online databases provided data for identifying the states with the worst mass shootings and related data. The SurveyMonkey® account provided participants from the five states and online access to the survey. SPSS was dedicated statistical software used to analyze the data.

Summary

The focus of this study was to document citizens' perceptions of gun control policies and gun-free zones to determine the relationships between perceptions of gun-free zones, demographic variables, attitudinal variables, and the accuracy of these

perceptions compared to historic evidence related to mass shootings in gun-free zones. The research design was nonexperimental, exploratory, and descriptive. RQ1 was the following: Do residents associate using gun-free zones with feelings of safety or feelings of concern? RQ2 was the following: Do residents believe that gun-free zones reduce gun-related violence and lower the occurrences of mass shooting incidents, and do these perceptions correlate to the empirical evidence related to mass shootings? The population of interest was comprised of residents of the five U.S. states where the five deadliest mass shooting incidents have occurred: Nevada, Florida, Virginia, Connecticut, and Texas.

Participants were randomly sampled from the SurveyMonkey Audience® database. Demographic characteristics were compared to national census statistics obtained from http://www.citidata.com, which was shown to represent the demographics of the nation. Twelve variables with the potential to influence perceptions of gun-free zones were described, requiring a minimum of 10 participants per variable; this requirement was met ($N = 126$ participants).

The Gun-free Zones Perceptions Survey (Appendix B) was based on Miller's (2004) National Firearm Survey and Cook and Ludwig's (2003) household firearm ownership survey. Scholars in the criminal justice field participated in a pilot test of the survey. The survey was accessed via SurveyMonkey after confirmation by the university IRB. The informed consent statement was clearly displayed. Participant anonymity and confidentiality was protected. The researcher completed research questions and follow-up analyses with associational tests (chi-squares and correlations), group comparisons (ANOVA tests), and predictive tests (regression).

Chapter 4: Results

The increase in mass shootings has made reducing gun violence a critical public policy imperative (Centers for Disease Control, 2017). Gun violence receives nightly attention from the media. Legislators have considered gun restrictions in nearly every state. As of this writing in spring 2018, gun violence has created widespread social protest among students and teachers in particular. However, surprisingly little is known about the general perceptions of gun control, gun-free zones, and related issues among the general citizenry. The purpose of this study was to explore citizens' perceptions about gun control policies, specifically about using gun-free zones, who resided in the five states with the highest rates of gun violence per capita—in descending order, these included Virginia, Florida, Texas, Nevada, and Connecticut. Moreover, these five states were the locations of the top five deadliest mass shootings in U.S. history to date.

The right to bear arms is specifically protected by the Second Amendment of the U.S. Constitution (U.S. Const. amend. II). However, since 1968, political and social peoples have debated the availability of firearms and concurrent increases in legislation aimed at preventing gun violence in general, as well as mass shooting incidents in particular. At the federal level, legislation to restrict gun ownership includes the National Firearms Act, the Gun Control Act of 1968, the Firearm Owners Protection Act, the Brady Handgun Violence Prevention Act, the Violent Crime Control and Law Enforcement Act, and the Domestic Violence Offender Act (as cited in Justia, 2009). At federal, state, and local levels, 51 different sets of laws govern handgun ownership and use. Of note, state and local laws that ban handguns have recently been overturned by the Supreme Court, as per the 2008 case *District of Columbia v. Heller* and the 2010 case of

McDonald v. Chicago (Justia, 2009). These cases indicated the belief that the Second Amendment protects an individual's right to possess a firearm (U.S. Const. amend. II).

This results chapter is divided into nine sections. The first section is a summary of handgun provisions by state. The second section briefly reviews data collection. The third section lists the research questions. The fourth section includes conventional demographic characteristics. The fifth section contains attitudinal demographic characteristics. The sixth and seventh sections include results for Research Questions 1 and 2. The eighth section provides follow-up analyses for predicting opposition or favoritism regarding gun-free zones. The final section is a summary

Summary of Handgun Provisions by State

Table 1 summarizes handgun provisions for each state in the current study to provide context for participants' perceptions regarding gun ownership and gun-free zones. The states are listed in alphabetical order, but Virginia has the highest rate of mass shootings per capita. In descending order of magnitude, Virginia is followed by Florida, Texas, Nevada, and Connecticut.

Among the five states, Nevada gun legislation is unique (see Table 1). It does not require a license for any of the listed gun laws. It allows citizens to have concealed or openly carried handguns virtually anywhere in the state. Finally, the only gun-free zones are federal facilities.

In contrast, Table 1 shows that Connecticut is unique in the opposite way to Nevada. Connecticut is the only state out of the five sampled states where leaders require a license for all listed gun laws, including a permit to possess a loaded handgun in the home or to carry a loaded handgun in the car. Connecticut leaders require a permit for

concealed or open carry of a handgun and make the permitting process onerous. Connecticut is part of the tristate area of Connecticut, New York, and New Jersey, which has some of the strictest handgun laws in the United States.

Florida, Texas, and Virginia require a permit for concealed or open carry of a handgun under certain circumstances (see Table 1). However, the requirements for obtaining a permit are lenient. Permits typically require the applicant to complete a gun safety course and have a record that is free of felony convictions.

Table 1

Gun Licensing Requirements by State

	Connecticut	Florida	Nevada	Texas	Virginia
Loaded Handgun in Car or Home	Yes	No	No	No	No
Concealed Carry Handgun	Yes	Yes	No	Yes	Yes
Open Carry Handgun	Yes	Yes	No	Yes	Yes
Mass Shootings/Million Rate	0.56	1.15	0.67	0.78	1.41

Note. Yes = License required. No = License not required. Mass Shootings/Million Rate = proportion of mass shootings per million citizens.

Brief Review of Data Collection

A stratified random sampling technique was used to recruit 25 residents from each of the states of Connecticut, Florida, Nevada, Texas, and Virginia. The sample was obtained by using the SurveyMonkey Audience® database. The sample size was 126 participants. One extra participant was provided for Connecticut.

Research Questions

The following research questions guided the study:

RQ1. Do residents associate using gun-free zones with feelings of safety or feelings of concern?

RQ2. Do residents believe that gun-free zones reduce gun-related violence and lower the occurrences of mass shooting incidents, and do these perceptions correlate to the empirical evidence related to mass shootings?

The following two sections present participants characteristics. The first section includes conventional demographic characteristics, such as gender, age, and marital status. The second section describes attitudinal characteristics, including each participant's personal experience with guns, degree of favoritism of second amendment rights, and knowledge of gun laws.

Conventional Demographic Characteristics

This section includes conventional demographic characteristics, such as gender, age, and marital status. This section shows that the modal participant was a married Caucasian man who was in his 20s, did not have any children, held a bachelor's degree, was a conservative, was equally likely to live in the city or a rural area, made $50,000-$75,000 last year in income, and was not a member of NRA. Participants were approximately evenly divided between men (n = 72, 57%) and women (n = 54, 43%). The somewhat higher percentage of men slightly over-weighed men in the sample relative to the latest overall U.S. population estimate of 49% men (U.S. Census Bureau, 2017).

Table 2 lists participants (percentages) across eight demographic characteristics. For ethnicity, Table 2 shows a 70 to 30 division of Caucasians to other ethnicities; this slightly under-weighed Caucasians in the sample relative to the latest overall U.S. population estimate of 76% Caucasians (U.S. Census Bureau, 2017). Just over half of the participants were under 40 years old, with decreasing percentages of participants in the

older age brackets, an age dispersion that is similar to the U.S. population (U.S. Census Bureau, 2017). The ratio of married to currently unmarried participants was approximately 2 to 1 (see Table 2). There was also an approximately even split between participants who did not have children compared to those who did have children (see Table 2).

Areas of residency were measured as urban, suburban, or rural areas. Comparable percentages of participants resided in cities (40%) and in rural areas (38%), with the remaining living in the suburbs (21%). This finding was similar to the latest overall U.S. population estimates (U.S. Census Bureau, 2017). According to the U.S. Census Bureau (2017), more than half of those living in rural areas (56%) owned a gun, compared with 40% of suburbanites and 29% of those in urban areas. For political affiliation, half of the participants said they were conservative, and a third said they were liberal. About 1 participant in every 10 said they were libertarian, and the small remaining percentage reported their affiliation as *other*.

Finally, Table 2 shows that a small percentage had not attended high school, and a quarter of the participants held bachelor's degrees. One out of five attended college without completing a degree, and a small percentage obtained graduate degrees. For household income, participants were approximately evenly divided as half made more than $50,000 annually, and half made less than that amount; this finding also mirrored the distribution of income levels estimated for the overall U.S. population (U.S. Census Bureau, 2017).

Table 2

Sample Demographics

Characteristic	*n* (%)	Characteristic	*n* (%)
Ethnicity (*N* = 126)		Community Type (*N* = 126)	
Caucasians	88 (70%)	City	51 (40%)
African Americans	18 (14%)	Suburban	27 (21%)
Hispanic/Other	20 (16%)	Rural	48 (38%)
Age (*N* = 126)		Political Affiliation (*N* = 125)	
18 - 29	38 (30%)	Conservative	62 (49%)
30 - 39	31 (25%)	Liberal	41 (32%)
40 - 49	22 (17%)	Libertarian	15 (12%)
50 – 64	17 (13%)	Other	7 (6%)
65+	18 (14%)		
Marital Status (*N* = 126)		Educational Attainment (*N* = 125)	
Single	41 (33%)	Primary Education	3 (2%)
Married	68 (54%)	High School Graduate/GED	37 (29%)
Separated/Divorced	12 (9%)	Some College	23 (18%)
Living with Partner	5 (4%)	Bachelor's Degree	53 (42%)
		Graduate Degree	9 (7%)
Number of Children			
No Children	52 (41%)	Household Income (*N*=126)	
1-6 Children	74 (59%)	Under $35,000	23 (18%)
		$35-$50,000	30 (24%)
		$50-$75,000	42 (33%)
		Over $75,000	32 (25%)

Attitudinal Demographic Characteristics

This section includes attitudinal demographic characteristics in three subsections: participants' personal experience with guns and gun ownership, degree of favoritism of Second Amendment rights, and knowledge of gun laws.

Personal experience with guns and gun ownership. Participants were asked several questions to characterize their personal experiences with guns and gun ownership. As described in detail below, the results showed three characteristics. One, participants were evenly divided on gun ownership, but the opinions varied by state; there were more nongun owners among participants from Connecticut but more gun owners among Florida and Texas participants. Two, regarding regular engagement in carrying a

concealed weapon, three times as many participants did not regularly engage in concealed carry, as did engage in concealed carry. Specifically, significantly fewer Connecticut and Virginia participants did not engage in concealed carry. In contrast, significantly more Florida and Nevada participants engaged in concealed carry. Three, regarding National Rifle Association (NRA) membership, the majority of participants in all five sampled states were not NRA members.

Gun ownership. In the current study, gun ownership was defined as one owning a gun personally or a member of the participant's household owning a gun. Based on this definition, participants were equally divided between gun ownership (n = 61 participants, 49%) and nongun ownership (n = 63 participants, 51%). The distribution of participants by gun ownership status and state of residence in Figure 1 shows that many more nongun owners exist compared to gun owners among participants from Connecticut. In contrast, more gun owners exist compared to nongun owners among participants from Florida and from Texas.

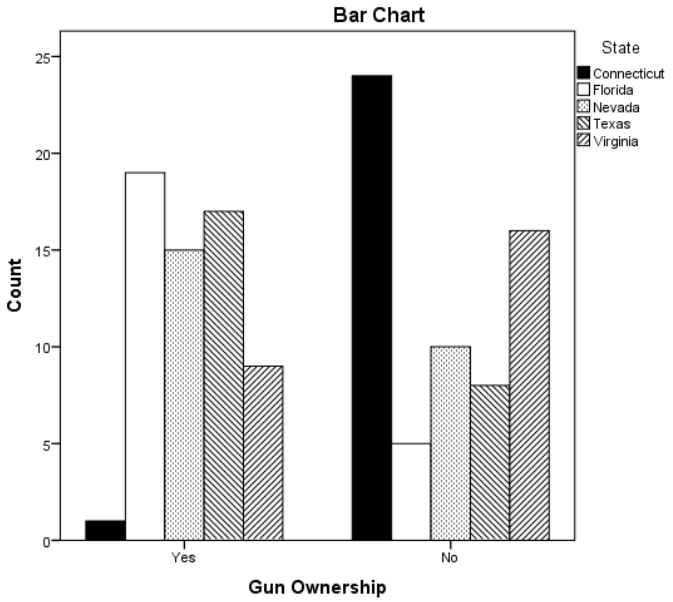

Figure 1. Frequency distribution of gun ownership by state.

A chi-square test of independence was conducted to see if there was a statistically significant association between gun ownership and states of residence, and if so, which states contributed to significance. The hypotheses were the following:

$H1_0$: The association between gun ownership and state of residence is not statistically significant.

$H1_a$: The association between gun ownership and state of residence is statistically significant.

The chi statistic indicated a significant association between the likelihood of gun ownership and state of residence, $X^2(4, 124) = 35.50$, $p < .001$. The null hypothesis was rejected. The chi-square results are listed in Table 3. Adjusted residuals showed there were significantly fewer gun owners among Connecticut participants than expected by chance but significantly more gun owners among Florida and Texas participants than expected by chance.

Table 3

Gun Ownership x State Cross Tabulation

		State					
Self/Household Member Gun Owner		Connecticut	Florida	Nevada	Texas	Virginia	Total
Yes	Count	1	19	15	17	9	61
	Expected Count	12.3	11.8	12.3	12.3	12.3	61.0
	% of State Total	4%	79%	60%	68%	36%	49%
	Adjusted Residual	-5.1	3.3	1.2	2.1	-1.5	
No	Count	24	5	10	8	16	63
	Expected Count	12.7	12.2	12.7	12.7	12.7	63.0
	% of State Total	96%	21%	40%	32%	64%	51%
	Adjusted Residual	5.1	-3.3	-1.2	-2.1	1.5	
Total	Count	25	24	25	25	25	124

Note. Percentages based on numbers of participants per state.

Concealed weapons. Participants were also asked if they or anyone in their households regularly carried a concealed weapon. Responses were unevenly divided. When considered in total, only 1 out of every 4 participants regularly carried a concealed

weapon (n = 35 yes concealed carry, 28%), compared to 3 out of 4 participants who did not regularly engage in concealed carry (n = 90 no concealed carry, 72%).

The frequency distribution of responses to this question, as illustrated on Figure 2, showed that more participants from all five states did not regularly carry a concealed weapon than did regularly carry a concealed weapon shows, and further that concealed carry behavior varied by state. The imbalance toward no regular concealed carry behavior was most extreme in Connecticut and Virginia, as none of the 25 Connecticut participants and only three Virginia participants regularly carried a concealed weapon. Differences in relative proportions among participants in the other states were less extreme.

A chi-square test of independence was conducted to see if there was a statistically significant association between regularity of concealed carry behavior and state of residence, and if so, which states contributed to significance. The hypotheses were the following:

$H2_0$: The association between regularity of concealed carry behavior and state of residence is not statistically significant.

$H2_a$: The association between regularity of concealed carry behavior and state of residence is statistically significant.

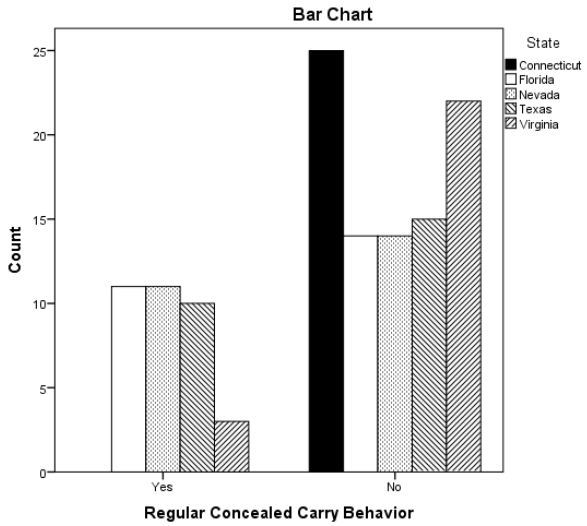

Figure 2. Frequency distribution of numbers of participants by regularity of concealed carry by state.

The chi-square statistic indicated the association between regularity of concealed carry behavior and state of residence was statistically significant, $X^2(4, 125) = 21.03$, $p < .001$. The null hypothesis was rejected. The chi-square results are listed in Table 4. Adjusted residuals showed that significantly fewer Connecticut and Virginia participants regularly engaged in concealed carry behavior than expected by chance. Alternatively, significantly more Florida and Nevada participants regularly engaged in concealed carry behavior than expected by chance. The number of Texas participants in each category did not differ from chance expectations.

Table 4

Regular Engagement in Concealed Carry x State Cross Tabulation

Regular Engagement		State					Total
		Connecticut	Florida	Nevada	Texas	Virginia	
Yes	Count	0	11	11	10	3	35
	Expected Count	7.0	7.0	7.0	7.0	7.0	35.0
	% of State Total	0%	44%	44%	40%	12%	28%
	Adjusted Residual	-3.5	2.0	2.0	1.5	-2.0	
No	Count	25	14	14	15	22	90
	Expected Count	18.0	18.0	18.0	18.0	18.0	90.0
	% of State Total	100%	56%	56%	60%	88%	72%
	Adjusted Residual	3.5	-2.0	-2.0	-1.5	2.0	
Total	Count	25	25	25	25	25	125

Note. Percentages based on $N = 125$ participants.

Current membership in the National Rifle Association (NRA). When asked about their statuses as current due-paying members of the NRA, the majority of participants were not members, as shown on Figure 3. A chi-square test showed that the association between NRA status and state of residence was nonsignificant, $X^2(4, 125) = 7.61$, $p = .11$, and the null hypothesis (i.e., the association between NRA status and state of residence was nonsignificant) was retained.

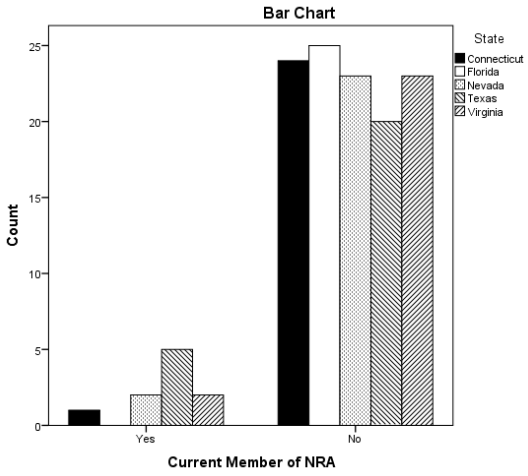

Figure 3. Frequency distribution of numbers of participants by NRA membership status and state.

Personal experience summated scale. Overall, the above results for participants' personal experience with guns and gun ownership showed they were equally divided on

owning and not owning a gun. They did not regularly engage in concealed carry and were not current members of the National Rifle Association (NRA).

These three variables about participants' personal experiences with guns (gun ownership, regularity of concealed carry behavior, and NRA membership) were measured dichotomously. These were dummy coded (*no = 0; yes = 1*), so that when added together into a summated scale, higher values reflected a higher measure of personal experience with guns. The possible range of this scale was 0 to 3 and is hereafter referred to as the Personal Experience Summated Scale (SS).

Three survey items questioned direct personal experience with gunfire and being shot, which was reviewed to determine whether to include these in the Personal Experience SS. Case 85 was the only participant who had been shot, and the incident had taken place more than five years ago. Only three participants said that someone used, displayed, or brought out a gun against them in a hostile manner in the last five years (Cases 2, 66, and 102). Because so few participants had this level of personal experience with guns, these three variables were excluded from the Personal Experience SS.

Knowledge of state gun-related regulations. Participants were asked to rate the extent of their knowledge about their state's regulations about gun ownership/gun use by choosing a number between 1 and 10 (*1 = no knowledge, 10 = extremely knowledgeable*). One in every five participants rated their knowledge 1 to 5 (18%, $n = 23$ participants). Four out of five participants rated their knowledge 6 to 10 (82%, $n = 102$ participants). Correspondingly, the overall average for knowledge about their state's gun regulations was high ($M = 7.78$, $SD = 2.26$, $min = 1$, $max = 10$).

It was of interest to see if participants' knowledge about their state's gun

regulations was uniformly high across the states, as suggested by the mean of 7.78, or differed across the states. Figure 4 illustrates participants' average knowledge across the states in descending order. The figure shows that Floridians reported the highest average level of knowledge (M = 9.36, SD = 1.41), followed by Connecticut (M = 8.56, SD = 1.85), Nevada (M = 7.52, SD = 2.04), Texas (M = 7.08, SD = 2.66), and Virginia (M = 6.40, SD = 1.89).

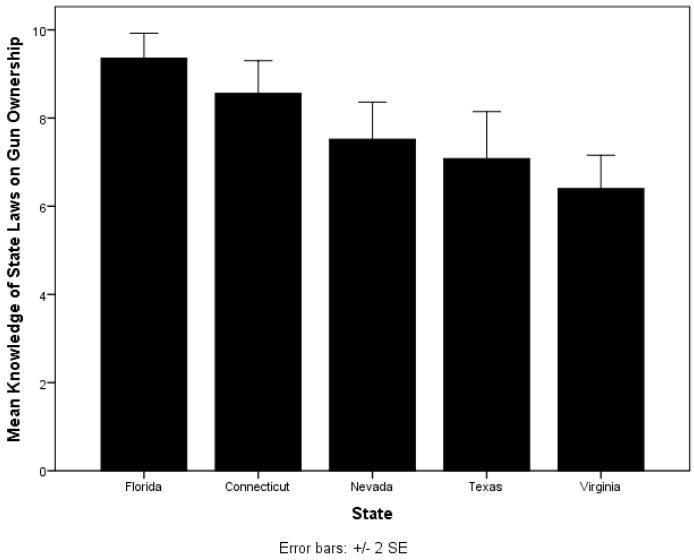

Figure 4. Mean knowledge of state's gun regulations (1-10 scale).

A one-way ANOVA was conducted to see if self-reported knowledge of state gun-related regulations differed across participants from the different states. The hypotheses were the following:

$H3_0$: Differences in average knowledge of state gun regulations were not statistically significant.

$H3_1$: Differences in average knowledge of state gun regulations were statistically significant.

ANOVA results showed that differences were statistically significant, $F(4,120) = 8.48$, $p < .001$, and the null hypothesis was correspondingly rejected. The effect of state

of residence on knowledge of the state's gun regulations was large, *partial eta*^{2} = .22. Planned comparisons with the Tukey's HSD test showed that Florida knowledge was significantly higher than all of the states but Connecticut, and Connecticut knowledge was significantly higher compared to Virginia knowledge. This variable is hereafter called the Gun Law Knowledge SS.

A related question that measured participants' knowledge of state gun regulations was the accuracy of their knowledge of their state's stances on concealed carry (n = 119 responses). All of the states represented by the participants (Connecticut, Florida, Nevada, Texas, and Virginia) allowed citizens to legally carry concealed weapons with the appropriate licensure. Table 5 shows the majority of participants from Florida, Nevada, Texas, and Virginia said their state allowed concealed carry. All participants from Texas and Virginia were correct that their state allowed concealed carry. Only two Floridians and one citizen of Nevada were incorrect. In contrast, Table 5 shows that 92% of the citizens of Connecticut (22 out of 24) were mistaken when they claimed the state did not allow citizens to carry concealed weapons.

Table 5

Participant Knowledge that State Allows Concealed Carry x State Cross Tabulation

		State					
State Allows Concealed Carry		Connecticut	Florida	Nevada	Texas	Virginia	Total
No	Count	22	2	1	0	0	25
	% of State Total	92%	8%	5%	0%	0%	21%
Yes	Count	2	22	21	25	24	94
	% of State Total	8%	92%	95%	100%	100%	79%
Total	Count	24	24	22	25	24	119

Note. Percentages based on N = 119 participants.

Degree of favoritism to second amendment rights. Three survey questions were used to investigate the degree to which participants agreed with the personal rights of gun ownership protected by the Second Amendment of the U.S. Constitution. Results are

listed on Table 6. For concealed carry, 2 out of 3 participants agreed that concealed carry behavior should be legal. For limits on gun purchases, 2 out of 3 participants agreed limits should be placed on the number of guns a person could buy per month. In contrast, approximately comparable proportions of participants agreed and disagreed with the positions held by the NRA. The reason for selecting positions held by the NRA as an attitudinal demographic is due to the notoriety that the NRA holds, as well as its influence in the political spectrum and input that the NRA has on implementing legislature due to its lobbying efforts.

Table 6

Proportions of Participants on Agreement With Second Amendment Rights

	Agreement With					
	Concealed Carry		NRA Positions		Monthly Limits on Gun Purchases	
	Frequency	Percent	Frequency	Percent	Frequency	Percent
No	39	32%	53	43%	49	39%
Yes	84	68%	71	57%	76	61%
Total	123	100%	124	100%	125	100%

Note. Frequency = numbers of participants.

As per the Second Amendment statistics in Table 6, the modal participant agreed that concealed carry behavior should be legal; limits should be placed on the number of guns a person could buy per month; and the participant agreed with NRA positions on guns. These variables were collapsed into a Second Amendment Favoritism SS by dummy coding the responses (*disagree = 0, agree = 1*) and summing the numeric values of the participants' responses, so higher scale values reflected stronger agreement with Second Amendment rights. The possible range of this scale was 0 to 3. One out of every three participants had a Second Amendment SS score of 0 or 1 (disagreement with Second Amendment rights; 39%, $n = 49$ participants). The remaining 2 out of 3 participants agreed with Second Amendment rights (61%, $n = 75$ participants).

Results for Research Question 1

Research Question 1 was the following: Do residents associate using gun-free zones with feelings of safety or feelings of concern? Results in this section show several dimensions exist to perceptions of gun-free zones and feelings of safety, and the participants are divided. However, the answer to the question is that participants associated gun-free zones with feelings of concern.

Agreement with the use of gun-free zones (opposition vs favoritism). Participants were asked if they agreed with gun-free zones (i.e., agreed with laws that ban people from bringing guns into certain geographic zones or areas). Responses fell into a 2-to-1 ratio of opposing versus favoring gun-free zones, as shown in Figure 5. For every two participants who said they did not agree with gun-free zones (*n* = 78, *no* participants; 62%), one participant agreed with gun-free zones (*n* = 47, *yes* participants; 38%). Hereafter, those who do not agree with gun-free zones are labeled *opposed to* gun-free zones. Those who agreed are labeled as *in favor of* gun-free zones.

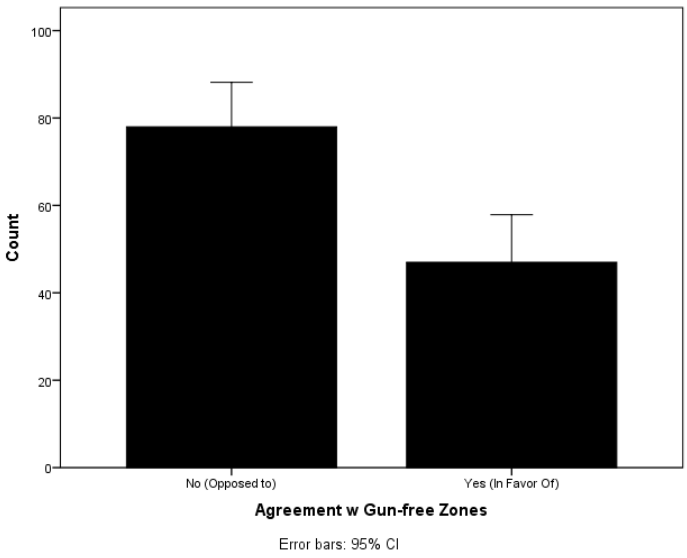

Figure 5. Frequency distribution of agreement with gun-free zones.

Relative feelings of safety in gun-free zones. Participants were asked if they felt

safer, less safe, or felt *no difference* regarding personal safety when in a gun-free zone. A subtotal of 106 participants provided responses. Twenty participants left the item blank. Another 2-to-1 ratio emerged in favor of less safe. Figure 6 shows that 63 out of 106 participants felt less safe in gun-free zones than otherwise (60%), as compared to 41 participants who felt safer in gun-free zones (39%). Two participants said their feelings of safety did not differ inside of gun-free zones compared to outside gun-free zones.

On the survey, participants who said they felt *less safe* in gun-free zones were asked to rate their level of decreased safety, using a 1 to 10 scale, where *10 = extremely unsafe*. For these 63 participants, the average perception of danger fell close to the maximum rating on the unsafe scale ($M = 7.63$, $SD = 1.80$, $min = 2$, $max = 10$, $Mdn = 8$, $Mode = 8$).

Figure 6. Frequency distribution of numbers of participants who felt less safe, safer, or no difference in safety inside compared to outside of gun-free zones.

On the survey, participants who said they felt *safer* in gun-free zones were also asked to rate how safe they felt, this time using a 1 to 10 scale, where *10 = extremely safe*. For these 41 participants, the average feeling of safety was also close to the

maximum on the safety scale (M = 7.63, SD = 1.51, min = 3, max = 10, Mdn = 8, $Mode$ = 8).

As these results show, participants who felt safer in gun-free zones were asked to provide safety ratings, whereas participants who felt less safe in gun-free zones were asked to provide *less safe* ratings. Each participant provided a rating on the *extremely unsafe scale* or on the *extremely safe scale*, not both. Therefore, one could directly compare feelings of safety to feelings of *less safe* ratings to address RQ1.

Cross-tabulation of agreement with and relative safety in gun-free zones. This section shows evidence of a very strong relationship between perceptions of opposition or favoritism to gun-free zones (see Figure 5) and how safe a person felt in a gun-free zone (see Figure 6), which directly applied to one addressing RQ1. The variable agreement with gun-free zones was cross-tabulated with the variable, feelings of safety in gun-free zones. Results, as shown in Figure 7, revealed a clear dichotomy: Of the 41 participants who were in favor of gun-free zones, 100% also felt safer in gun-free zones. In contrast, of the 65 participants who opposed gun-free zones and provided a response to the safety question, 63 felt less safe. The remaining two participants, who opposed gun-free zones, said that gun-free zones did not affect their feelings of safety.

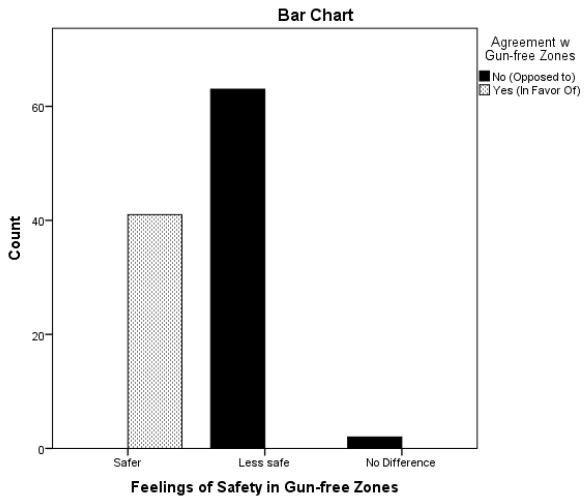

Figure 7. Cross-tabulation of opposition/favoritism and relative safety in gun-free zones.

The direct tie between opposition versus favoritism toward gun-free zones and relative feelings of safety in them, as illustrated in Figure 7, showed that perceptions of gun-free zones were directly related to how safe each participant felt in the zones. Participants who opposed gun-free zones also felt much less safe when in the zones. In contrast, participants who favored gun-free zones also felt much safer when in the zones. However, the question rose as to whether feelings of safety also related to gun ownership in the community. Evidence presented in the next section indicates that the answer is *yes*.

Feelings of safety and gun ownership in the community. As shown above, feelings of safety were closely associated with opposition or favoritism to gun-free zones. Therefore, safety was explored further with a correlation to quantify the association between feelings of safety and gun ownership in the surrounding community. Specifically, one survey item asked participants to rate their feelings of safety if efforts were put in place to encourage law-abiding citizens in the community to *carry* guns; participants chose one number on a 1 to 10 scale, where *10 = extremely safe*. The other item asked participants to rate their feelings of safety if more people in the community were to *own* guns, again by using a 1 to 10 scale, where *10 = extremely safe*. The

correlation between these two variables was direct, strong, and statistically significant, $r(118) = .87$, $p < .001$, $r^2 = 76\%$.

Recall that there was a 2-to-1 ratio of participants who were opposed to or in favor of gun-free zones (see Figure 5). The scatter plot in Figure 8 illustrates the difference in the correlations between participants who opposed gun-free zones (white circles, see Figure 8) or were in favor of gun-free zones (black squares, see Figure 8). The distinct separation of those opposed or in favor is seen in the distribution of the two symbols on the scatter plot: The white circles representing participants who oppose gun-free zones are clustered in the upper right, whereas the black squares representing participants who favor gun-free zones are clustered in the lower left. In addition, the lines of best fit are clearly separate.

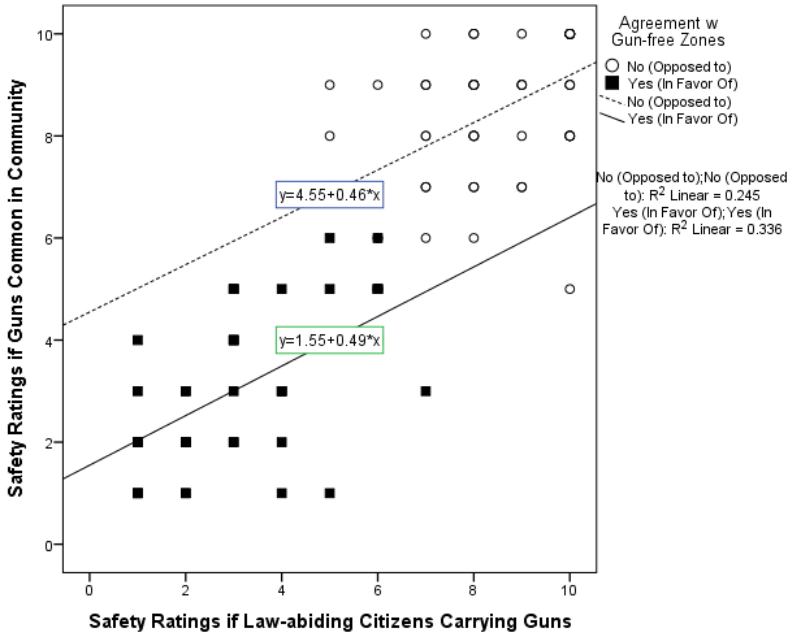

Figure 8. Scatter plot of direct correlation between feelings of safety if efforts were put in place to encourage law-abiding citizens to own and carry guns. The separate clusters and lines of best fit show the distinct perspectives of participants who favored gun-free zones (black squares) or opposed gun-free zones (white circles).

Perceptions about restaurants, campuses, and stadiums as gun-free zones.

Another dimension of how participants felt about gun-free zones emerged from responses

to survey questions about bringing guns into gun-free zones, specifically into restaurants, campuses, and stadiums. Thirteen participants left the question blank, and another 42 participants of the remaining 113 participants (37%) chose the survey option of *prefer not to answer*.

Of the 113 participants who provided a response, Figure 9 shows that a third said it was permissible for citizens to carry guns into restaurants (32%, $n = 36$ participants). One out of five participants said it was permissible for citizens to carry guns onto campuses (18%, $n = 20$ participants). The fewest participants felt guns were permissible in sports stadiums (13%, $n = 15$ participants). Of note was that participants were only allowed to choose one answer, so this variable was not used to generate a Gun-free Zone Approval SS.

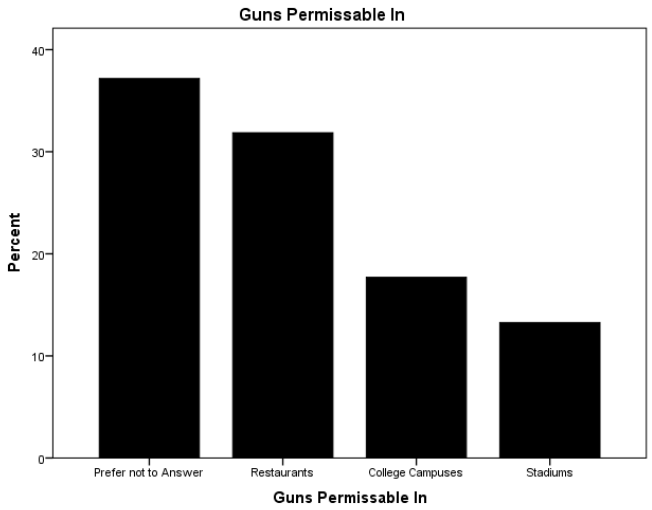

Figure 9. Percentages of participants who agreed that guns are permissible in various public facilities (i.e., probability of disagreement with specific locations as gun-free zones).

Answer to RQ1. RQ1 was the following: Do residents associate using gun-free zones with feelings of safety or feelings of concern? The answer was residents associated using gun-free zones with feelings of concern. Recall that participants were twice as likely to oppose using gun-free zones as to favor these, which indicated feelings of

concern (see Figure 5). Perceptions of gun-free zones were directly related to how safe the person felt in gun-free zones (see Figure 7): Participants who opposed gun-free zones also felt much less safe when in these, whereas participants who favored gun-free zones felt much safer when in these zones. Mean ratings of relative safety in gun-free zones indicated that being in a gun-free zone provoked very strong reactions. Participants who felt safe in gun-free zones felt *extremely safe*. In contrast, participants who felt less safe in gun-free zones felt close to *extremely unsafe*. Safety was related to guns in the community, as reflected by the strong and direct correlation between feelings of safety if efforts were placed encourage law-abiding citizens to carry guns and if more law-abiding members of a community owned guns.

Results for Research Question 2

RQ2 was the following: Do residents believe that gun-free zones reduce gun-related violence and lower the occurrences of mass shooting incidents, and do these perceptions correlate to the empirical evidence related to mass shootings? RQ2 has three parts. Each is addressed separately below, followed by a summary answer to the question.

Impact of gun control measures and gun-free zones on reducing gun-related violence. The first part of RQ2 was whether participants believed that gun-free zones reduced gun-related violence. This section shows that participants' perceptions of the impact of broadly defined gun control measures on reducing gun-related violence are closely tied to their perceptions of the impact of gun-free zones on reducing gun-related violence.

Gun control measures. Participants were asked if they agreed with the statement that *gun control measures* reduced incidents of gun violence. Responses to this item were

examined to address the first part of RQ2 (do residents believe that gun-free zones reduce gun-related violence?). Another 2-to-1 ratio emerged. Figure 10 shows that, for each participant who agrees that gun control measures reduce incidents of gun violence (n = 48 participants, 38%), two participants disagree that gun control measures reduce incidents of gun violence (n = 77 participants, 62%).

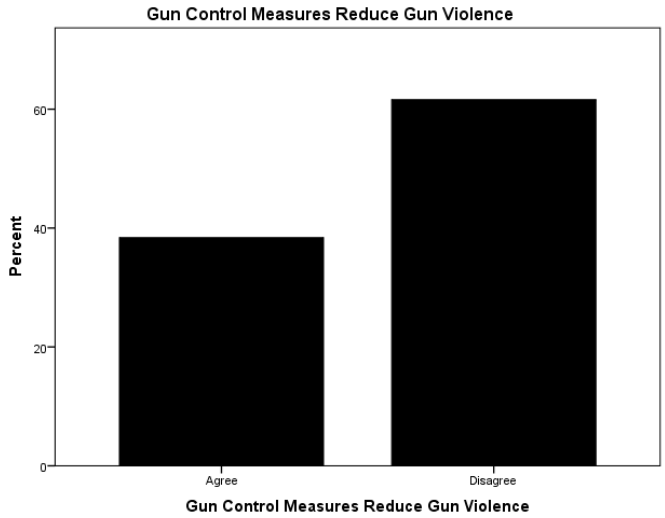

Figure 10. Percentages of participants who agreed and disagreed that gun control measures reduce incidents of gun violence.

Gun-free zones. Participants were then asked if they agreed with the statement that using *gun-free zones* reduced incidents of gun violence. Responses to this item were also examined to address the first part of RQ2 (do residents believe that gun-free zones reduce gun-related violence?). Another 2-to-1 ratio emerged. Figure 11 shows that, for each participant who thinks that gun-free zones reduces incidents of gun violence (n = 43 participants, 34%), two participants think gun-free zones do not reduce incidents of gun violence (n = 82 participants, 66%).

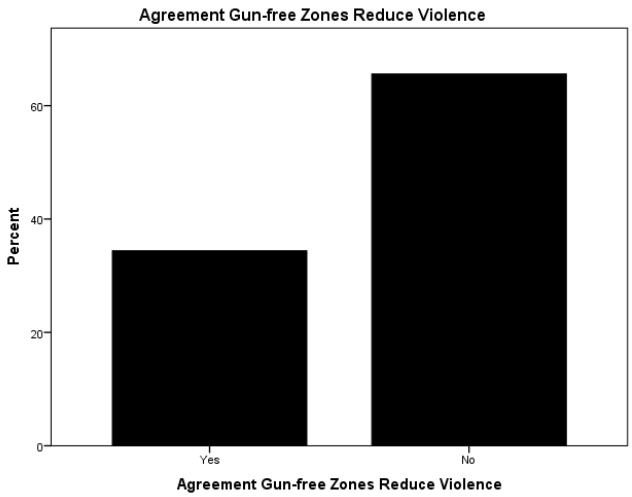

Figure 11. Frequency distribution of percentages of participants by agreement that gun-free zones reduce gun-related violence.

Cross-tabulation of gun control measures and gun-free zones. To determine if the same participants expressed similar views about the relative impact of gun control measures (see Figure 10) versus gun-free zones (see Figure 11) on reducing violence, these two variables were cross-tabulated (see Figure 12). The illustration shows that 42 of the 48 participants who agree that gun control measures reduce violence also think gun-free zones reduce violence (88%). Conversely, of the 77 participants who disagreed that gun control measures reduced violence, 76 (99%) also disagreed that gun-free zones reduced violence. Six participants thought gun control measures reduced gun violence but gun-free zone did not reduce violence. One participant did not think gun control measures reduced violence but thought that gun-free zones did reduce violence.

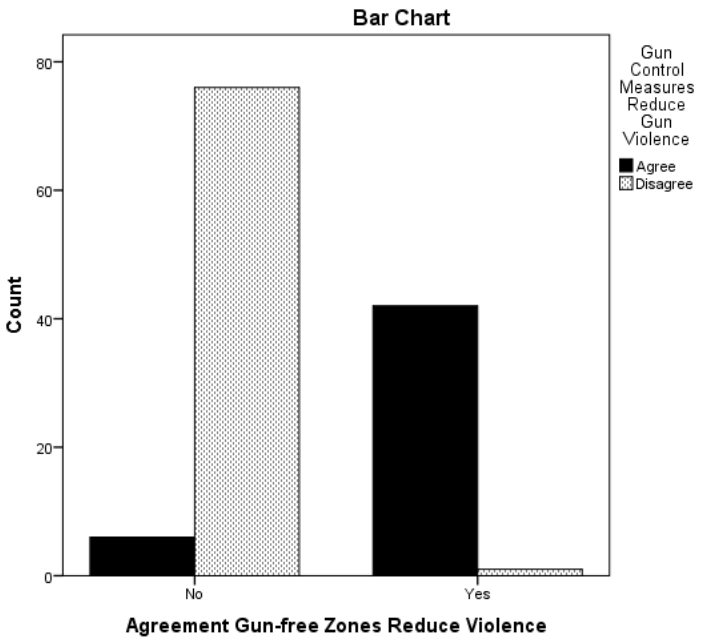

Figure 12. Cross-tabulation that gun control measures and gun-free zones reduce incidents of gun violence.

Mass shooting incidents and gun-free zones. The second part of RQ2 was whether residents believed that gun-free zones lowered the occurrences of mass shooting incidents. Again, a clear 2-to-1 ratio of diametrically-opposed perceptions emerged. For every two participants who thought mass shootings occurred inside gun-free zones (n = 78 participants, 62%), one participant thought mass shootings occurred outside gun-free zones (n = 47 participants, 38%). One participant left the item blank, and none of the participants chose the *prefer not to answer* option.

However, the clear 2-to-1 ratio of diametrically-opposed perceptions that emerged did not characterize all states in the same way. Figure 13 illustrates the numbers of participants by their perceptions of the locations of mass shootings (inside gun-free zones = black bars; outside gun-free zones = stippled bars) parsed out by states. Participants from Connecticut, Florida, Nevada, and Texas said a higher proportion of mass shootings occurred inside gun-free zones. Figure 13 shows that participants who are from Virginia are the exceptions.

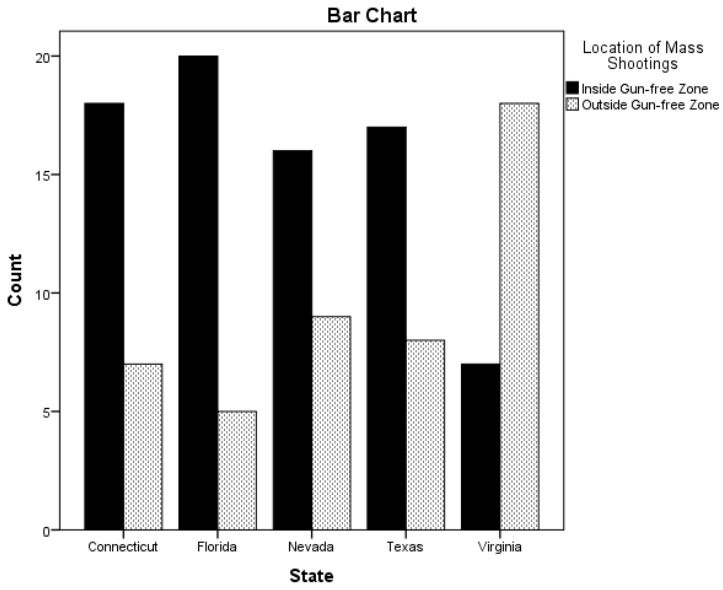

Figure 13. Participants' perceptions of mass shooting locations relative to gun-free zones by states.

Occurrence of mass shootings in gun-free zones: Accuracy of participants' knowledge. The final part of RQ2 was whether participants' perceptions correlated to the historical (empirical) evidence of the location of mass shootings as primarily inside or outside of gun-free zones. This section shows the results of comparing the state statistics to the participants' perceptions shown in Figure 13 and that all participants from Virginia have accurate perceptions.

Table 7 lists the official statistics on the number of mass shooting events that have occurred 2017 in the five sampled states by location inside or outside of gun-free zones. There was a total of 62 mass shootings in the sampled states that year. Of these, 71% or 7 out of 10 occurred in gun-free zones (n = 44 incidences), whereas 29% or 3 out of 10 occurred outside gun-free zones (n = 18 incidences). Percentages of locations for the individual states showed that mass shootings occurred inside gun-free zones considerably more often compared to outside gun-free zones for every state. The exception was Nevada; of the two mass shootings in 2017, one occurred in a gun-free zone, and the

other occurred in a nongun-free zone.

Moreover, the total number of mass shootings in 2017 varied by state, but the percentages of mass shootings that occurred inside gun-free zones were strikingly similar across the states. Overall, 71% of the total number of 2017 mass shootings in 2017 occurred in gun-free zones. In 2017, Florida was the state with the highest recorded number of mass shootings, 71% of which occurred inside gun-free zones and was identical to the overall percentage of mass shooting locations. Texas was the state with the second highest number of recorded mass shootings in 2017, of which 68% occurred inside gun-free zones, similar to the overall statistic and percentage of Florida incidences. Virginia had half as many mass shooting incidents in 2017, as did Florida and Texas, a dozen in all. However, 75% of these occurred inside gun-free zones (see Table 7). This finding was similar to the overall Florida and Texas percentages. Connecticut sustained two mass shootings; both occurred in gun-free zones (100%).

Table 7

Number of Mass Shootings (MS) in 2017 by State

	Florida	Texas	Virginia	Connecticut	Nevada	Total
Total Incidences	24	22	12	2	2	62
MS in Gun-free Zones	17	15	9	2	1	44
Actual % Gun-free Zones	71%	68%	**75%**	100%	50%	71%
Participant % GFZ	80%	68%	**28%**	72%	64%	62%
MS in Nongun-free Zones	7	7	3	0	1	18
Actual % Nongun-free Zones	29%	32%	**25%**	0%	50%	29%
Participant % NGFZ	20%	32%	**72%**	28%	36%	38%
State Population (Millions)	20.9	28.3	8.5	3.6	3.0	64.3
Mass Shootings/Million	1.15	0.78	1.41	0.56	0.67	0.91

Note. Actual % Gun-free Zones = 2017 statistics on the proportion of mass shootings that occurred inside a gun-free zone. Participant % GFZ = Percentages of participants in the current study who thought mass shootings occurred inside gun-free zones. Actual % Nongun-free Zones = 2017 statistics on the proportion of mass shootings that occurred outside a gun-free zone. Participant % NGFZ = Percentages of participants who thought mass shootings occurred outside gun-free zones.

For the third part of RQ2, a comparison of the percentages of actual mass shootings to

participants' perception of the percentages, listed in Table 7, showed that Virginians had the least accurate perceptions.

Impact of increased law-abiding gun ownership on crime. Along these lines, participants were asked a reciprocal question to the above question on the role of gun-free zones reducing mass shootings: If the number of law-abiding citizens who carried guns in the community was increased, did participants think the impact would be to lower crime, increase crime, or fail to exert an impact? These data provided more insight into the participants' perceptions of gun-free zones.

Figure 14 shows that the distribution of responses does not fall into a 2-to-1 ratio. The largest group of participants thought that citizens carrying guns did not impact crime (40%, n = 50 participants). A third thought that more citizens carrying guns would lower crime (34%, n = 40 participants). The smallest group, about 1 in 4 participants, thought that crime would increase if more citizens carried guns (26%, n = 33 participants).

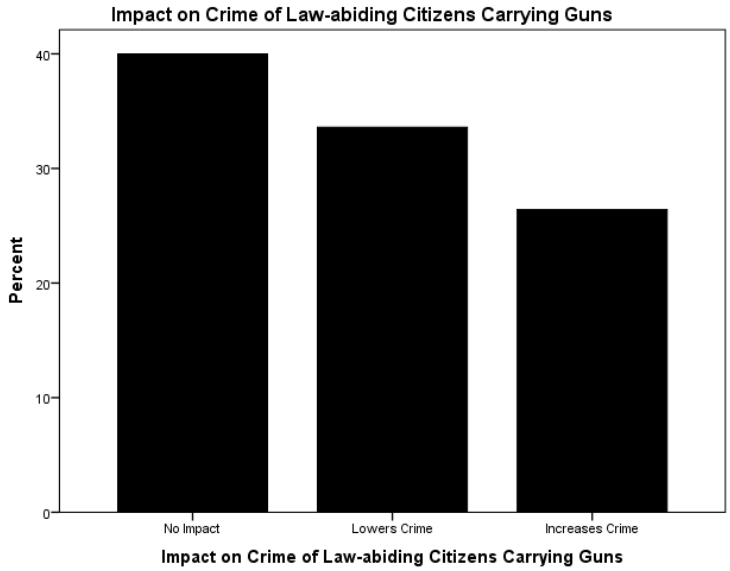

Figure 14. Frequency distribution of participants on impact of more law-abiding citizens carrying guns.

Change in likelihood of visiting a gun-free zone. The likelihood of visiting a known gun-free zone was related to participants' perceptions of the impact of gun-free

zones on mass shootings and more generic impact of gun-carrying law-abiding citizens. This survey question was whether the knowledge that a location was a designated gun-free zone as defined in this study (i.e., on a volunteer basis) changed the participant's likelihood of visiting the zone. Again a 2-to-1 ratio emerged in favor of no influence in the likelihood of visiting. The majority said *no*: The gun-free zone label would not influence their likelihood of visiting that location (67%, $n = 84$ participants). The remaining third said *yes*: The gun-free zone label would influence their likelihood of visiting that location (33%, $n = 41$ participants).

Answer to RQ2. The answer to RQ2 (do residents believe that gun-free zones reduce gun-related violence and lower the occurrences of mass shooting incidents, and do these perceptions correlate to the empirical evidence related to mass shootings?) varied across the three parts of the question. The answer to the first part of RQ2 (whether participants believed that gun-free zones reduced gun-related violence) was *no*, as based on a 2-to-1 ratio. For each participant who agreed that gun-free zones reduced gun violence, two participants disagreed that gun-free zones reduced gun violence. Responses to the impact of gun control measures on gun violence were closely matched.

The answer to the second part of RQ2 (whether residents believed that gun-free zones lower the occurrences of mass shooting incidents) was *no*, again based on a 2-to-1 ratio. For each participant who thought mass shootings occurred outside gun-free zones, two participants thought mass shootings occurred inside gun-free zones. However, participants from Virginia were exceptions.

The answer to the third and final part of RQ2 (whether participants' perceptions correlated to the historical/empirical evidence of the location of mass shootings as

primarily inside of or outside of gun-free zones) was *yes* for participants from Florida, Texas, Nevada, and Connecticut; however, participants from Virginia were exceptions. Historic statistics on mass shootings in 2017 showed that the clear majority occurred in gun-free zones. Comparisons of historic statistics to participant perceptions showed that Virginians had an inaccurate understanding, but participants in Connecticut, Florida, Texas, and Nevada had accurate understandings of the percentage of mass shootings inside gun-free zones. A 2-to-1 ratio emerged that knowing a location was a gun-free zone did not change the likelihood of visiting the zone.

Follow-up Analyses for Predicting Opposition or Favoritism to Gun-Free Zones

This section includes the results of examining the role of demographic variables by running a multiple regression to see if these have the potential to moderate perceptions of opposing or favoring gun-free zones. There was not a specific research question for the examination of moderating variables, but it was of interest when exploring perceptions.

Recall that there were nine demographic variables (gender, ethnicity, age, marital status, number of children, community type, political affiliation, educational attainment, and annual income) and three "attitudinal" demographic variables (Personal Experience SS, Second Amendment Rights Favoritism SS, and Knowledge of Gun Laws SS). The predicted or dependent variable was opposition to/favoritism with gun-free zones (opposed to or in favor of). The potential predictor variables were the demographic variables.

A multiple regression was conducted using the "enter" method, in which all variables were entered into the regression at the same time, and therefore given equal weight (Warner, 2013). Regression was used to answer the following questions: Do these

variables, alone or in combination, explain a significant amount of opposition or favoritism about gun-free zones? If so, which specific variables make unique contributions to prediction perceptions about gun-free zones?

As per the two questions that the regression was used to answer, regression analyses was used to test two sets of hypotheses. In the current study, the first set tested the hypothesis that the demographic variables did not contribute to predicting opposition or favoritism about gun-free zones. The null hypothesis was $H1_0$: $R^2 = 0$, and the alternative hypothesis was $H1_a$: $R^2 > 0$. Regression results showed that the demographic variables explained a statistically significant 88% of perceptions of gun-free zones, $R^2 = .88$, $F(12, 123) = 68.39$, $p < .001$. The null hypothesis $R^2 = 0$ was rejected.

The second set of hypotheses tested the prediction that the slope of the regression line was zero (i.e., was horizontal) for each predictor variable. The null hypothesis was $H2_0$: $Beta = 0$, and the alternative hypothesis was $H2_a$: $Beta \neq 0$ for each predictor variable. The results of the regression are listed on Table 8. Primarily, the *t* and *p* statistics showed that only two demographic variables, Second Amendment Favoritism SS and annual income, made statistically significant contributions to prediction. Correspondingly, the null hypothesis ($H2_0$: $Beta = 0$) was rejected for Second Amendment Favoritism SS and annual income. The null hypothesis was retained for the remaining predictor variables.

Moreover, note the substantial differences on Table 8 between the zero-order correlations and the much smaller partial correlations for all of the demographic variables listed under annual income. Each zero-order correlation quantified the relationship between opposition/favoritism with gun-free zones and that predictor variable *without*

considering interrelationships with the other predictor variables. In contrast, each partial correlation quantified the relationship between opposition/favoritism with gun-free zones and that predictor variable *after* considering interrelationships with the other predictor variables by removing the effects. The substantial differences between the zero-order correlations and the much smaller partial correlations for all of the variables listed under annual income in Table 8 indicate that, for each of these variables, its relationship with agreement with gun-free zones is only indirect because the relationship is mediated through other demographic variables.

Based on the results in Table 8, the regression model was respecified using Second Amendment Favoritism SS scores and annual income as predictor variables. The dependent or predictor variable was again opposition to/favoritism with gun-free zones. These two demographic variables showed a statistically significant 86% of perceptions of gun-free zones, $R^2 = .86$, $F(2, 124) = 381.97$, $p < .001$. The null hypothesis that $H2_0$: $R^2 = 0$ was rejected.

Table 8

Regression Coefficients Predicting Agreement With Gun-Free Zones Based on all Demographic Variables

	Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
Model	*B*	*SE*	*β*	*T*	*p*	*Zero-order*	*Partial*	*Part*	*T*	*VIF*
Constant	1.06	.14		7.54	.00					
Second Amendment Favoritism SS	-.26	.02	-.74	-12.90	.00	-.91	-.77	-.42	.32	3.07
Annual Income	-.07	.02	-.16	-3.50	.01	-.54	-.31	-.11	.51	1.95
Gun Law Knowledge SS	-.01	.01	-.08	-1.65	.10	-.70	-.15	-.05	.40	2.40
Personal Experience SS	-.02	.02	-.05	-1.20	.22	-.60	-.11	-.04	.50	1.98
Gender	-.01	.03	-.01	-0.31	.75	.25	-.03	-.01	.80	1.24
Area	-.01	.02	-.01	-0.29	.76	-.51	-.02	-.01	.63	1.58
Number of Children	.01	.01	.01	0.35	.72	.24	.03	.01	.68	1.45
Political Party	.00	.02	.01	0.01	.98	.34	.01	.01	.74	1.34
Marital Status	.02	.02	.03	0.73	.46	.11	.07	.02	.60	1.65

Age	.01	.01	.05	1.31	.19	-.03	.12	.04	.59	1.68
Ethnicity	.03	.02	.06	1.51	.13	.55	.14	.04	.60	1.66
Education	.03	.02	.06	1.55	.12	-.37	.14	.05	.58	1.72

Note. T = Tolerance.

Both predictor variables, Second Amendment Favoritism SS scores and annual income, made unique and statistically significant contributions to predicting agreement with gun-free zones, as shown by the *t* and *p* statistics in Table 9. For both predictors, the slight differences in value between the zero-order correlation and its corresponding partial correlation showed that the predictor variable was related to the opposition/favoritism with gun-free zones, even after the other predictor was controlled or factored out.

The β values on Table 9 show that the Second Amendment Favoritism SS carries over four times as much weight in predicting opposition or favoritism with gun-free zones than does annual income. The formula for predicting opposition or favoritism with gun-free zones was the following: Predicted Agreement with Gun-free Zones = 1.17 - 0.30(Second Amendment Favoritism SS score) - 0.06(annual income).

Table 9

Regression Coefficients Predicting Agreement With Gun-Free Zones Based on Two Predictor Variables

	Unstandardized Coefficients		Standardized Coefficients			Correlations			Collinearity Statistics	
Model	*B*	*SE*	*β*	*T*	*p*	*Zero-order*	*Partial*	*Part*	*Tolerance*	*VIF*
Constant	1.17	.05		20.73	.00					
Second Amendment Favoritism SS	-0.30	.01	-.85	-22.47	.00	-.91	-.89	-.75	.78	1.27
Annual Income	-0.06	.01	-.14	-3.88	.00	-.54	-.33	-.13	.78	1.27

The correlation between Second Amendment Favoritism and opposition of favoritism with gun-free zones was very strong, inverse, and statistically significant, $r(123) = -.92$, $p < .001$ (see Figure 15). The descending line of best fit was included;

otherwise, the limited range of numeric values of the data points made the correlation difficult to visualize. The figure shows that opposition to gun-free zones is associated with high scores on the Second Amendment Favoritism SS, and favoritism toward gun-free zones is associated with low scores on the Second Amendment Favoritism SS.

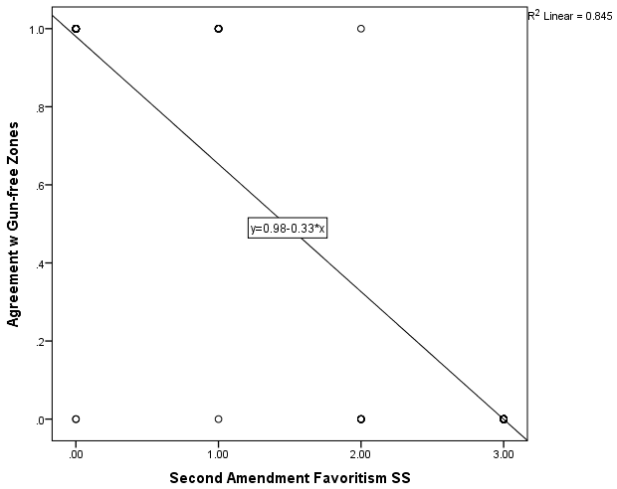

Figure 15. Scatter plot of correlation between Second Amendment Favoritism SS and the dichotomous measure agreement with gun-free zones.

The correlation between annual income and opposition/favoritism with gun-free zones was similarly strong, inverse, and statistically significant, $r(123) = -.54$, $p < .001$. Figure 16 shows the scatter plot of the relationship with its descending line of best fits because the limited range of numeric values of the data points makes the correlation difficult to visualize.

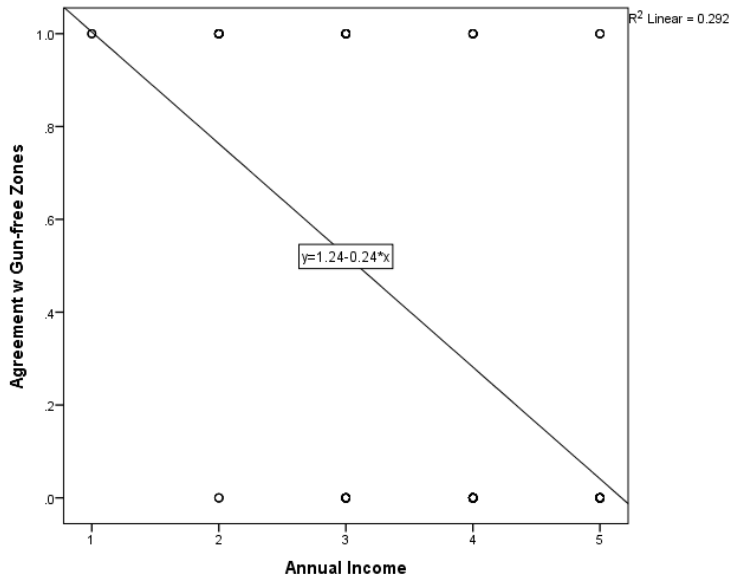

Figure 16. Scatter plot of correlation between annual income and the dichotomous measure agreement with gun-free zones.

Summary

The modal participant was a married Caucasian man who was under 30 years old, did not have any children, held a bachelor's degree, was a conservative, equally likely to live in the city or rural area, and made $50,000-$75,000 last year in income (N = 126 participants). Participants' modal personal experiences with guns and gun ownership included an equal likelihood of owning or not owning a gun but no regular engagement in concealed carry or current membership in the NRA; these data were collapsed into the Personal Experience SS. Four out of five participants rated their knowledge of their state's gun regulations as high, but a significant number of Connecticut residents reported incorrect knowledge; these data were labeled Gun Law Knowledge SS. The modal participant agreed that concealed carry behavior should be legal; limits should be placed on the number of guns a person could buy per month; and the participant agreed with NRA positions on guns. These variables were collapsed into a Second Amendment Favoritism SS.

The answer to RQ1 (do residents associate using gun-free zones with feelings of safety or feelings of concern?) was that participants were twice as likely to associate using gun-free zones with feelings of concern, rather than feelings of safety. Participants reported a 2-to-1 ratio of opposition to and favoritism with gun-free zones. Perceptions of gun-free zones were directly related to feelings of relative safety in gun-free zones: Participants who opposed gun-free zones felt unsafe when inside the zones, whereas participants who favored gun-free zones felt safe when inside the zones. Moreover, mean safety ratings indicated that being in a gun-free zone provoked very strong reactions. Participants who felt safer in gun-free zones felt close to extremely safe. In contrast, participants who felt less safe in gun-free zones felt close to extremely unsafe. Relative feelings of safety were closely tied to gun ownership in the community and also differed along the 2-to-1 opposition/favoritism ratio: Participants who opposed gun-free zones felt safer if more law-abiding citizens owned and carried guns, whereas participants who favored gun-free zones felt less safe if more law-abiding citizens owned and carried guns. In descending order, participants thought it permissible to carry guns into restaurants, school campuses, and stadiums.

The answer to RQ2 (do residents believe that gun-free zones reduce gun-related violence and lower the occurrences of mass shooting incidents, and do these perceptions correlate to the empirical evidence related to mass shootings?) varied across the three parts of the question. The answer to the first part of RQ2 (whether participants believed that gun-free zones reduced gun-related violence) was no, based on a 2-to-1 ratio: For each participant who agreed that gun-free zones reduced gun violence, there were two participants who disagreed that gun-free zones reduce gun violence. Responses to the

impact of gun control measures on reducing gun violence were closely matched to perceptions of the role of gun-free zones in reducing gun violence. The answer to the second part of RQ2 (do residents believe that gun-free zones lower the occurrences of mass shooting incidents?) was no, again based on a 2-to-1 ratio. For each participant who thought mass shootings occurred outside gun-free zones, two participants thought mass shootings occurred inside gun-free zones; however, participants from Virginia were exceptions. The answer to the third and final part of RQ2 (whether participants' perceptions correlated to the historical/empirical evidence of the location of mass shootings as primarily inside of or outside of gun-free zones) was yes for participants from Florida, Texas, Nevada, and Connecticut, and no for participants from Virginia.

Historic statistics on mass shootings in 2017 showed that the clear majority occurred in gun-free zones. Comparisons of historic statistics to participant perceptions showed that Virginians had an inaccurate understanding, but participants in Connecticut, Florida, Texas, and Nevada had accurate understanding of the percentage of mass shootings inside gun-free zones. Nearly half of the participants (40%) thought that citizens carrying guns did not impact crime; 34% thought it lowered crime; and 26% thought it increased crime. The majority (67%) of participants said that knowing that a location was a designated gun-free zone would not influence their likelihood of visiting that location.

Multiple regression showed that opposition versus favoritism with gun-free zones was predicted by the degree of favoritism with Second Amendment rights (participants who opposed gun-free zones were in greater agreement with Second Amendment rights) and annual income (participants who opposed gun-free zones made $50,000+ annually).

The formula for predicting opposition or favoritism with gun-free zones was the following: Predicted Agreement with Gun-free Zones = 1.17 - 0.30(Second Amendment Favoritism SS score) - 0.06(annual income).

Chapter 5: Discussion

Summary of Study

The issue of gun violence was a known problem of paramount importance, but how to deal with this problem was open for debate. There were generally two opposing viewpoints on the issue of gun control: one that supported strict gun control legislation and one that was strongly in favor of law abiding citizens exercising their constitutional rights to keep and bear arms. The purpose of this study was to explore citizens' perceptions about gun control policies, specifically about using gun-free zones, who resided in the five states with the highest rates of gun violence per capita—in descending order, these included Virginia, Florida, Texas, Nevada, and Connecticut. The study had four main goals: (a) to assess the impact of gun control measures, particularly using gun-free zones, on the perceptions of risk and security that residents maintained within an assigned jurisdiction; (b) to ascertain the perceptions that residents had regarding known pro-gun areas where responsible citizens could legally carry firearms, as well as determine whether gun-free zones influenced their likelihood of visiting a prescribed location; (c) to understand resident perceptions regarding using gun-free zones pertaining to the impact on reducing incidents of mass shootings; and (d) to compare the perceptions of citizens with the statistical data on incidents of mass shootings to determine whether the perceptions correlated to reality. This chapter presents the interpretation of the findings of the study, as well as recommendations for future research.

The study was guided by two research questions:

RQ1: Do residents associate using gun-free zones with feelings of safety or feelings of concern?

RQ2: Do residents believe that gun-free zones reduce gun-related violence and lower the occurrences of mass shooting incidents, and do these perceptions correlate to the empirical evidence related to mass shootings?

$H1_0$: There is no association between gun-free zones and feelings of safety.

$H1_a$: There is an association between gun-free zones and feeling of safety.

$H2_0$: Participants' perceptions of the relationship between mass shootings and gun-free zones are not associated with the facts.

$H2_a$: Participants' perceptions of the relationship between mass shootings and gun-free zones are associated with the facts.

The study analyzed the responses from (N = 126) participants from the five states where the deadliest mass shootings in U.S. history have occurred: Nevada, Florida, Virginia, Connecticut, and Texas. A stratified random sample was collected from residents of these states in equal number. This approach was chosen to garner opinions from residents who were the most impacted by these mass shootings. Participants were approximately evenly divided between men (n = 72) and women (n = 54); however, this sample was slightly over-weighted when compared to the most recent census of the U.S. population, which estimated a 49% male population (U.S. Census Bureau, 2017). In addition to sex, areas of residency were measured as urban, suburban, or rural, with approximately 40% of participants residing in cities, 38% in rural areas, and 21% residing in suburban areas. More specifically, the study delineated participants based on their experiences with guns and gun ownership. Again, participants were approximately evenly divided between those who owned guns (n = 61) and those who did not own guns (n = 63). In addition to gun ownership, participants were also asked whether they or

anyone in their household regularly carried a concealed weapon, as well as if they or anyone in their household were members of the NRA. From these responses, a personal experience summated scale was developed relating to participants' personal experiences with guns. Participants were also asked to rate their knowledge of gun laws in their State of residency. Participants appeared to have a high knowledge of their respective state's gun laws, with Florida residents rating their knowledge the highest of all five states. Finally, participants were asked questions designed to investigate their degree of support for the Second Amendment of the U.S. Constitution. Again, from these questions, a personal summated scale was developed.

Results and Discussion

The goal of this study was to gauge the attitudes and perceptions of citizens relating to using gun control policies, specifically using gun-free zones. A thorough review of the existing research indicated that this study was unique in its approach because it attempted to understand the perceptions of citizens related to using gun free zones surrounding their feelings of safety or concern when visiting these types of locations (Altheimer & Boswell, 2012; Robbers, 2005). The majority of existing literature has shown the statistics related to gun violence and the influence of gun control policies on that violence (Smith & Cooper, 2013; Valenti et al., 2007). Additionally, researchers have studied the effectiveness of gun free zones, as well as theoretical policies that may prevent gun violence (Kopel, 2009; Lenn, 2014); however, there has been little to no research conducted on how using gun control policies or gun free zones influenced feelings of safety or concern for the citizens affected by gun free zones.

Research Question 1. Research Question 1 explored these feelings by attempting

to ascertain whether participants associated using gun free zones with feelings of safety or concern. The rationale for this question was culminated in the idea that if citizens felt that gun free zones were effective (i.e., these prevented an offender from having a gun or committing an act of violence), then they should have feelings of safety. Equally, if citizens felt that gun free zones were not effective (i.e., these did not prevent an offender from having a gun or committing an act of violence), then they would have feelings of concern. The responses from participants allowed one to identify these feelings, and ways different individual characteristics influenced these perceptions. The data revealed that the majority of respondents felt less safe when inside the confines of a gun free zone.

When the data were analyzed, several other themes began to materialize, along with a division between perceptions. The first and most notable result was that the majority of participants were opposed to using gun free zones at a 2 to 1 ratio. Additionally, respondents who were against using gun free zones were *very* opposed to using these zones. Carter (2000) noted that even if all of the firearm statistics were removed, the United States still had the highest rate of homicide when compared to other industrialized countries. Participants opposed to gun free zones might similarly believe that guns were just a tool used in violence, and violence would still occur regardless of regulations.

Alternatively, Hoskin (2001) concluded, "Lethal violence is likely to be high in countries with greater supplies of privately owned guns" (p. 587). Conversely, respondents who were in favor of gun free zones were *strongly* in favor of using these zones. As such, participants in favor of gun free zones might believe that violence could be reduced if perpetrators struggled to obtain access to a gun. The primary method via

which legislators have attempted to prevent acts of gun violence and keep firearms out of the hands of criminals in the United States was through enacting gun control policies (Jacobs & Potter, 1995). Similarly, Stell (2004) contended that increases in gun control measures coincide with the ideas of many liberal scholars who argue that increasing gun control measures will marginally reduce homicide rates.

While the majority of the respondents indicated they were opposed to gun free zones, the data still revealed that this is a hotly debated topic. The majority of participants may feel that gun free zones lead to citizens not being able to protect themselves. Jasper (2013) argued that the United States is already heavy laden with laws that are intended to prevent violent crimes and restrict firearm ownership and use; yet, gun control advocates neglect to recognize that these same laws restrict the ability of law-abiding citizens to protect themselves. As such, the literature also indicated mixed findings, which further indicate the need for more empirical research on this topic. This finding also indicated that the majority of participants felt that gun free zones are not effective at stopping acts of gun related violence. This conclusion is in correlation with the historical data on mass shootings, which reveals that the majority of mass shootings have occurred within the confines of a gun free zone (Hong et al., 2010; Levenson, 2017; Schildkraut & Muschert, 2014).

Interestingly, all of the participants were either strongly opposed to, or strongly in favor of gun free zones. This could indicate that participants had clear ideas of either the positive repercussions of gun free zones or the negative repercussions of gun free zones, which could be in correlation with their previous experiences of gun free zones or the opinions of influential people in their lives. None of the participants indicated a neutral

response, which may be because mass shootings have been happening more often, shedding the light on gun violence, and forcing the public to make a decision on their perception of gun violence and gun free zones.

Another theme that arose was a strong correlation between citizens who were opposed to using gun free zones and feelings of concern, again at a 2 to 1 ratio. Jasper (2013) postulated that the offender of Sandy Hook broke multiple existing laws in the process of committing the tragedy, indicating that gun control policies will only limit law abiding citizens and not offenders who intend to commit a crime. Accordingly, there was a strong correlation between those who were in favor of using gun free zones and feelings of safety. The underlying concept of gun-free zones is that they are, "intended to provide a safe environment for individuals without the possibility of firearms being brought into the area and displayed, discharged or used for any purpose" (Lenn, 2014, p. 1), which may be the belief of these participants. Again, interestingly, participants did not merely have feelings on this topic, but they had *very strong* feelings on this issue. Those who felt feelings of concern felt *very* strong feelings of concern; whereas, those who had feelings of safety had *very* strong feelings of safety.

Another theme that was identified was a strong correlation between participants' feelings of safety and law-abiding citizens being encouraged to own and carry firearms in the community. As previously mentioned, the correlation between gun ownership (to include carrying firearms), and feelings of safety was statistically significant. Thus, the majority of participants felt that if more law-abiding citizens were encouraged to own and carry firearms in the community, then they would be safer because. Currently, the law prohibits the sale of a firearm to anyone who has been convicted (or is currently being

charged with) a crime that is punishable by more than one year in prison; a fugitive from justice; or, someone who is an illicit drug user or has been declared mentally unstable (Jacobs & Potter, 1995), which may be why participants believed that they would be safer when citizens are allowed to carry firearms. Still, it should be noted that those who felt strongly about discouraging gun ownership (and the carrying of firearms in the community) had distinct feelings of concern when more people owned and carried guns in the community.

Research Question 2. Research question two asked participants if they felt that gun free zones reduced incidents of gun related violence, and whether or not those perceptions correlated to the historical data. The data revealed a strong correlation between participants' feelings on using gun free zones and their opinion regarding their effectiveness at stopping acts of gun related violence. Again a 2 to 1 ratio emerged, with the majority of respondents who disagreed with the effectiveness of gun free zones, revealing that the majority of respondents felt that gun free zones do not lower occurrences of mass shooting incidents. Kopel (2009) explained regarding using gun-free zones, "absolute bans have proven to be extremely dangerous because they turn schools into uniquely attractive targets for mass murderers" (p. 2). This coincides with the fact that an overwhelmingly high percentage of mass shootings occur within the confines of a gun-free zone (Lenn, 2014). This data was then compared to the historical data related to incidents of mass shooting events in the five States used for the study. The evidence revealed that roughly 70% of all mass shootings in 2017 occurred within the confines of what would be classified as a gun free zone. Thus, the majority of participants' perceptions were in correlation with the literature in that gun free zones are not effective

at stopping incidents of mass shooting.

What this data revealed is that there are distinct differences related to perceptions concerning using gun control policies and gun free zones. The majority of participants, at a 2 to 1 ratio, felt that gun free zones were not effective and that they felt unsafe when located inside of a classified gun free zone. The most likely rationale for this conclusion is based upon the idea that an offender who is going to actively break the law is not concerned with whether or not he or she is bringing a gun inside of a gun free zone, which is in correlation with the assertion made by Jacobs and Potter (1995) that gun policies only affected law abiding citizens. Quite the opposite, many offenders might feel that gun free zones provided a prime area to break the law because no one inside the gun free zone could defend themselves against the criminal. This finding correlated with Lenn (2014), who stated that schools became prime targets because of being a gun free zone. For this reason, the majority of participants felt that abolishing gun free zones and encouraging law-abiding citizens to carry firearms in the community would *reduce* incidents of gun related violence.

The study also indicated that several factors had a strong influence on participants' opinions related to gun control policies and using gun free zones. Stark (2001) described gun control as "an umbrella term to cover a variety of regulations that dictate what types of guns can be owned by which citizens under what conditions" (p. 25). The Second Amendment of the U.S. Constitution stated, "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, para 2). Primarily, participants who were strongly in favor of Second Amendment rights were opposed to gun control policies

and using gun free zones. Conversely, those who were not as supportive of Second Amendment rights were in favor of gun control policies and using gun free zones. Again, a 2 to 1 ratio emerged, with the majority of respondents being in favor of Second Amendment rights. The data also indicated that an individual's support or lack thereof of the Second Amendment could predict their perceptions related to using gun free zones. This information indicated that citizens of the five states polled had very strong feelings related to the Second Amendment and the ineffectiveness of gun control policies, specifically using gun free zones. Additionally, their feelings of support or lack thereof of the Second Amendment could *predict* their opinion of gun control policies. The findings correlated with Glantz and Annas (2009), who stated that gun control policies were a major political issue in the United States since the inception

The data indicated that a very large segment of the population of the five states polled were in support of the Second Amendment of the United States, and they expressed that existing gun control measures were ineffective. This conclusion was supported by the historical data, which indicated that the overwhelming majority of mass shootings occurred *within* the confines of a gun free zone. Based on historical data on mass shootings, this finding meant the majority of participants' perceptions correlated with the literature that gun free zones were ineffective at stopping incidents of gun related violence. The majority of participants also expressed that if law abiding citizens were encouraged to carry firearms, their feelings of safety would increase. Thus, the majority of participants might have been influenced by guns and gun control in such a matter that they specifically made a decision on their beliefs regarding this topic. However, both research questions provided a 2 to 1 ratio, indicating the significance of this topic, as all

participants were also concentrated at the extreme ends of the spectrum. This finding was also in correlation with the literature, as researchers have provided opposing data (Jasper, 2013; Stell, 2004). The findings of this study contributed to the existing body of knowledge, yet the findings did not entirely explain the mixed findings in the literature, providing further avenues for research.

Strengths of the Study

The major strength of this study was that it examined citizens who resided in the five states where the deadliest mass shootings in U.S. history have occurred. This strength made the study relevant and noteworthy to modern times by isolating respondents who were most influenced by recent mass shootings. Another strength of the study was that it utilized a stratified random sample that was chosen with the goal of representing the populations of the states in which the study was performed; however, the sample did not precisely correlate with the census data of each state.

The study obtained a variety of respondents, including a near even split between males and females. Additionally, respondents covered a wide age range, and the overwhelming majority of respondents had a high school education or higher, with 42% of respondents having a Bachelor's degree. Respondents also represented various political groups, with 49% claiming to be conservative, 32% claiming to be liberal, 12% claiming to be libertarian, and 6% claiming other political persuasions. Therefore, the population utilized for the study covered a wide range of citizens and correlated to the majority of suburban America. Another strength was that the analysis of the data revealed the general population in the five states included in the study were either highly opposed to or highly in favor of gun free zones and policies, adding to the current body of

literature.

Weaknesses of the Study

A weakness of the study was that the modal participant was a married Caucasian man who was in his twenties, did not have children, held a bachelor's degree, was conservative, and made $50,000 to $70,000 USD last year in income. This modal participant would have different views compared to a minority participant who had children, was not college educated, and made less than $50,000 per year. Additionally, the study had a higher number of males over females that participated in the study, which did not precisely correlate to the U.S. population last year (U.S. Census Bureau, 2017); if this aspect was controlled for, it would have added to the strength of the findings. Finally, more than half of the respondents were under 40 years of age, and there was a nearly 2 to 1 ratio of unmarried versus married participants.

Another weakness regarding the sample was that only 25 to 26 participants were recruited from each state. While the sample included a sufficient number of participants to result in quantifiable findings, a larger sample from each state would have added to the generalizability of the data. This larger sample might have provided one with a more realistic result on the opinions of the general public regarding gun free zones and gun policy.

The political persuasion of participants could also indicate a weakness of the study. The rationale for this conclusion was based on the concept that the majority of conservatives and libertarians had distinct and set opinions in favor of the Second Amendment and against most gun control policies. Likewise, liberals had distinct and set opinions regarding these issues, which were often contrary to the opinions of

conservatives. Overall, the study indicated a 2 to 1 ratio of respondents who were in favor of the Second Amendment and opposed gun control policies. This finding directly correlated to the 61% of respondents who identified themselves as either conservative or libertarian. Thus, while this aspect was a weakness to the study, it also demonstrated the strong influence that political opinion could have on any controversial issue.

Because the study was aimed at understanding public opinion, another weakness was the study did not provide evidence on the actual reality of gun free zones and its effectiveness but only showed how the public perceives gun free zones in the five included states. In following a quantitative methodology, one could not determine why participants had these specific views regarding gun free zones and gun policy. However, the finding did indicate an avenue for possible further research.

Last, the findings of this research would have a more significant impact if participants were included from all states. One could use this aspect to gain more in-depth analysis of opinions across states. One could correlate these with the statistics of gun violence in those states.

Limitations of the Study

A known limitation of the study was that the researcher could not clearly ascertain the depth of knowledge that respondents had regarding the role that gun free zones might or might not play in mass shootings. The media also contributed to this limitation, as the media did not always report information accurately or with all the facts; therefore, respondents might have been misinformed on some of these issues, and even the circumstances surrounding recent mass shootings. This aspect could influence their opinions on these issues.

Another limitation of the study was related to the level of respondents' knowledge regarding gun free zones. The researcher attempted to clearly define what constituted a gun free zone; however, respondents might have preconceived notions regarding what a gun free zone actually was, including locations that might or might not be considered a gun free zone. This aspect also applied to the fact that many respondents might not be aware that the majority of mass shootings did occur within the confines of a gun free zone. Finally, there were stereotypes associated with guns, which could negatively influence respondents and cause them to have an immediate aversion to gun related issues, including gun control policies.

Implications

With the recent rise in mass shooting events, the topic of gun control measures is extremely important and relevant. Understanding the effectiveness of gun control policies is inherently necessary to address this issue and potentially stop incidents of gun violence. As previously mentioned, the existing research on gun control policy lacks any investigation into the perceptions of those who are most impacted by policy—the citizens (Altheimer & Boswell, 2012; Robbers, 2005). Therefore, the data collected from this study is extremely important and adds to the existing research on gun control policy, albeit from a unique perspective, because it supports previous studies on the effectiveness of gun free zones (Kopel, 2009; Lenn, 2014).

The present study indicated that the majority of respondents did not associate feelings of safety with using gun free zones. Additionally, the data from this study indicated those perceptions were accurate based on the fact that the majority of mass shootings in 2017 occurred within the confines of a gun free zone. Therefore, it appears

that respondents concur with the assertion of Carter (2000), who concluded that firearms are merely a tool and that violence will occur regardless of specific gun control policies.

While the focus of this study was not to specifically ascertain the effectiveness of gun free zones, a basic look at the data did reveal that the majority of mass shootings occurred within the confines of a gun free zone. Hence, the perceptions of the majority of respondents appeared accurate regarding their feelings of concern when being inside the confines of a gun free zone. This, coupled with the fact that gun control policies have been deemed a major political issue in the United States (Glantz and Annas, 2009), means that the data collected from this study can have a tremendous impact on future gun control policies. Consequently, policy makers should examine and consider this information if they wish to understand their constituents regarding their perceptions of gun free zones, including their feelings of safety and concern related to using such measures.

Therefore, in conclusion, the data collected from this research study has an extremely practical and valid utility, should policy makers take it into consideration. The data clearly indicates that the majority of respondents do not agree with the implementation of gun-free zones, and that their use causes feelings of concern in the general public. Moreover, these feelings correspond to the historical data related to mass shootings. As noted above, 71% of mass shootings in the five states polled occurred within the confines of a gun-free zone. This fact also corresponds to the data obtained from respondents, with the majority feeling that gun free zones are not effective at reducing acts of gun violence. It would appear that respondents hold strongly to their 2nd Amendment rights and feel that the use of gun-free zones is an unconstitutional policy

that prevents them from defending themselves while in public.

Based on this information, the research strongly argues for the abolishment of gun-free zones as a gun control policy. The data clearly reveals that gun-free zones have not been effective at reducing acts of gun violence. Additionally, the abolishment of gun-free zones is supported by the research presented in this study, which captures the feelings of the citizens impacted most by such laws, who expressed deep feelings of concern related to the use of gun-free zones. The data collected in this study exposed a truth that has not previously been made public, nor considered by lawmakers in the past. Legislators must take this valuable information into account and amend existing gun control policies, including the removal of gun-free zones as a tactic for reducing acts of violence.

Future Research

As previously mentioned, this study had a higher number of males who participated in the study versus females. While gender analysis was not a goal of this study, it was an area that could warrant research. In a similar fashion, this study isolated respondents who resided in the five states where the deadliest mass shootings occurred. In retrospect, one should investigate what the feelings of citizens are in the five states where the least deadly mass shootings have occurred. This research can provide information that one can compare and or correlate to either confirm or deny the overall representation of this study. Likewise, future researchers can analyze who perceptions vary amongst citizens of different states. Again, this researcher did not attempt to make those determinations, but these would provide valuable information that one could use to determine whether an individual's state of residence has any influence on their

perceptions of gun control policies and using gun free zones.

One area that can receive considerable research is related to the knowledge of citizens regarding using gun free zones. This researcher may include participant's general knowledge of the laws surrounding gun free zones, as well as their knowledge of the geographical areas that are often classified as gun free zones. Many citizens in the United States may not be aware that they frequently visit locations or establishments that are classified as gun free zones. Researchers can also investigate whether this knowledge will influence their likelihood of visiting those locations.

This study indicated that favoritism of the Second Amendment had a considerable impact on respondent's perceptions of gun control policies and using gun free zones. Future researchers can identify what other variables, in conjunction with Second Amendment favoritism, influence the position of respondents on these issues. Based on the data from this study, gender may play a role in this discussion. One can thoroughly investigate the full magnitude of that influence in future research. Similarly, future researchers can attempt to understand the correlation, if any, that exists between gender, political affiliation, marital status, children, income, and educational level. Again, this researcher obtained some of these identifying variables but did not acquire enough data to make any clear predictions or assertions.

The purpose of this study was not to ascertain or determine whether using gun free zones was effective at stopping incidents of mass shootings. Rather, the study was aimed specifically about the use of gun-free zones, by polling citizens who resided in the five states with the highest rates of gun violence per capita—in descending order, these included Virginia, Florida, Texas, Nevada, and Connecticut. This researcher did not make

any empirical claim to the effectiveness of gun free zones or any other gun control policy. However, future research should be conducted to analyze accurately the true effectiveness of gun free zones.

References

Altheide, D. L. (2009). The Columbine shootings and the discourse of fear. *American Behavioral Scientist*, *52*(10), 1354-1370. doi:10.1177/0002764209332552

Altheimer, I., & Boswell, M. (2012). Reassessing the association between gun availability and homicide at the cross-national level. *American Journal of Criminal Justice, 37*, 682-704. doi:10.1007/s12103-011-9147-x

Bachman, R., & Schutt, R. K. (2011). *The practice of research in criminology and criminal justice* (4th ed.). Thousand Oaks, CA: Sage.

Beale, S. S. (2002). The unintended consequences of enhancing gun penalties: Shooting down the commerce clause and arming federal prosecutors. *Duke Law Journal, 51*, 1641-1681. Retrieved from https://dlj.law.duke.edu/

Bilski, A. (1991). Tragedy in Texas: A shooting spree leaves 23 people dead. *Maclean's, 104*(43), 34. Retrieved from https://www.macleans.ca/

The Brady Law, Pub. L. No. 103-159, 107 Stat. 1536 (1993).

Brown, P. (2006). The tower shooting: 40 years later ("armed citizens shot back with their deer rifles"). *Free Republic*. Retrieved from http://www.freerepublic.com/

Buynovsky, S. (2012, September 25). *30 years after a killing spree*. Retrieved from http://www.wnep.com

Calamur, K., Koren, M., & Ford, M. (2015, December 3). A day after the San Bernardino shooting. *The Atlantic*. Retrieved from http://www.theatlantic.com/national/archive/2015/12/a-shooter-in-san-bernardino/418497/

Carter, G. L. (2000). Dueling statistics. *Forum for Applied Research and Public Policy,*

15(4), 68-75. Retrieved from http://forum.ra.utk.edu/

Chin, P. (1991). A Texas massacre. *People Magazine, 36*(17). Retrieved from https://people.com/

Chuang, A. (2012). Representations of foreign versus (Asian) American identity in a mass shooting case: Newspaper coverage of the 2009 Binghamton Massacre. *Journalism and Mass Communication Quarterly, 89*(2), 244-260. doi:10.1177/1077699012439179

Cohen, J. W. (1988). *Statistical power analysis for the behavioral sciences* (2nd ed.). Hillsdale NJ: Lawrence Erlbaum.

Colloff, P. (2006). 96 minutes. *Texas Monthly, 34*(8), 102-200. Retrieved from https://www.texasmonthly.com/

Cook, P. J., & Ludwig, J. (2003). Fact-free gun policy? *University of Pennsylvania Law Review, 151*(4), 1329-1340. doi:10.2307/3312931

Creswell, J. (2014). *Research design: Qualitative, quantitative, and mixed method approaches.* Los Angeles, CA: Sage.

Davies, G. K. (2008). Connecting the dots: Lessons from the Virginia Tech shootings. *Change, 40*(1), 8-15. doi:10.3200/CHNG.40.1.8-15

Desmond, C. (2008). From cities to schoolyards: The implications of an individual right to bear arms on the constitutionality of gun-free zones. *McGeorge Law Review, 1043*, 1-43. Retrieved from http://www.mcgeorge.edu/Publications/The_University_of_the_Pacific_Law_Review.htm

Farmer, D. L. (1994). *United States v. Lopez*: The Fifth Circuit declares the Gun-free

School Zone Act of 1990 an unconstitutional extension of congressional power under the commerce clause. *Tulane Law Review, 68*(1674), 1-15. Retrieved from http://www.tulanelawreview.org/

Federal Bureau of Investigation. (2017). *Active shooter incidents in the United States from 2000 through the end of 2016.* Retrieved from https://www.fbi.gov/file-repository/activeshooter_incidents_2001-2016.pdf/view

The Federal Firearms Act, 15 U.S.C. §§ 901-909 (1938).

The Firearms Owner's Protection Act of 1986, 18 U.S.C. § 921 (1986).

Flippin, P. (2007). UT tower shooting heroes to be honored. *Standard-Times*. Retrieved from http://www.gosanangelo.com

FLA. STAT. § 790.6(12; 2017).

Glantz, L. H., & Annas, G. J. (2009). Handguns, health, and the Second Amendment. *The New England Journal of Medicine, 360*(22), 2360-2365. doi:10.1056/NEJMhle0900209

The Gun Control Act of 1968, 18 U.S.C. § 44 (1978).

The Gun Control Act of 1968, 18 U.S.C. §§ 921-922 (1994).

Gun-free School Zone Act of 1990, 18 U.S.C. § 922 (1990).

Hair, J. F., Jr., Black, W. C., Babin, B. J., Anderson, R. E., & Tatham, R. L. (2010). *Multivariate data analysis*. Upper Saddle River, NJ: Prentice Hall.

Helmke, P. (2013). Targeting gun violence. *Public Administration Review, 73*(4), 551-552. doi:10.1111/puar.12081

Hemenway, D., & Miller, M. (2000). Firearm availability and homicide rates across 26 high income countries. *The Journal of Trauma and Acute Care Surgery, 49*(6),

985-986. Retrieved from https://journals.lww.com/jtrauma/pages/default.aspx

Hemenway, D., Shinoda-Tagawa, T., & Miller, M. (2002). Firearm availability and female homicide victimization rates among 25 populous high-income countries. *Journal of the American Medical Women's Association, 52*(2), 100-104. Retrieved from http://journalamwa.com/index.php/JAMWA

Hetzner, A. (2011). Where angels tread: Gun-free school zone laws and an individual right to bear arms. *Marquette Law Review, 95*, 359-408. Retrieved from http://scholarship.law.marquette.edu/mulr/

Hong, J. S., Cho, H., & Lee, A. S. (2010). Revisiting the Virginia Tech shootings: An ecological systems analysis, *Journal of Loss and Trauma, 15*, 561-575. doi:10.1080/15325024.2010.519285

Hoskin, A. (2001). Armed Americans: The impact of firearm availability on national homicide rates. *Justice Quarterly, 18*(3), 569-592. doi:10.1080/07418820100095021

Hoskin, A. (2011). Household gun prevalence and rates of violent crime: A test of competing gun theories. *Criminal Justice Studies, 24*(1), 125-136. doi:10.1080/1478601X.2011.544445

Inman, W. (1986). Patrick Sherrill's bloody day of reckoning in Okla. *Philadelphia Inquirer*, A23.

Jacobs, J. B., & Potter, K. A. (1995). Keeping guns out of the "wrong" hands: The Brady Law and the limits of regulation. *The Journal of Criminal Law & Criminology, 86*(1), 93-120. Retrieved from https://scholarlycommons.law.northwestern.edu/jclc/

Jasper, W. F. (2013). False solutions to gun violence. *The New American, 29*(7), 10-16. Retrieved from https://www.thenewamerican.com/

Justia. (2009). *McDonald v. Chicago, 561 U.S. 742*. Retrieved from https://supreme.justia.com/cases/federal/us/561/742/

Kahan, D. M., & Braman, D. (2003). More statistics, less persuasion: A cultural theory of gun risk perceptions. *University of Pennsylvania Law Review, 151*(4), 1291-1327. doi:10.2307/3312930

Kopel, D. B. (2009). Pretend gun-free school zones: A deadly legal fiction. *Connecticut Law Review*, *42*, 515. Retrieved from https://www.law.uconn.edu/student-life-resources/law-review-journals/connecticut-law-review

Krug, E. G., Dahlberg, L. L., Mercy, J. A., Zwi, A. B., & Lozano, R. (2013). *World report on violence and health.* Geneva, Switzerland: World Health Organization.

Lavergne, G. (2007). The legacy of the Texas tower sniper. *The Chronicle of Higher Education*, A22-A23. Retrieved from https://www.chronicle.com/

Lavrakas, P. (2008). *Encyclopedia of survey research methods.* Thousand Oaks, CA: Sage Publications. doi:10.4135/9781412963947

Lemieux, F. (2014). Effect of gun culture and firearm laws on gun violence and mass shootings in the United States: A multi-level quantitative analysis. *International Journal of Criminal Justice Sciences*, *9*(1), 74-93. doi:10.1.1.686.7970

Lenn, L. E. (2014). What are gun-free zones and are they safe? *Journal of Legal Issues and Cases in Business, 3*, 1-18. Retrieved from http://www.aabri.com/jlicb.html

Leshner, A. I., Atevogt, B. M., Lee, A. F., McCoy, M. A., & Kelley, P. W. (Eds.). (2013). *Priorities for research to reduce the threat of firearm-related violence*.

Washington, DC: National Academy of Sciences.

Levenson, E. (2017, October 10). The cold, calculating timeline of the Las Vegas gunman. *CNN*. Retrieved from https://www.cnn.com/2017/10/05/us/las-vegas-shooting-timeline/index.html

Lott, J. R. (2012). How do multiple victim public shooters decide where to attack? *Academy of Criminal Justice Sciences Today, 37*(4), 14-17. Retrieved from https://www.acjs.org/page/ACJSToday

Luzadder, D. (1999, October 3). Loophole protects Columbine witness. *Rocky Mountain News*. Retrieved from http://rockymountainnews.com/

Maxfield, M., & Babbie, E. (2009). *Basics of research methods for criminal justice and criminology* (2nd ed.). Belmont, CA: Cengage Learning.

McGinty, E. E., Webseter, D. W., & Barry, C. L. (2013). Effects of news media messages about mass shootings on attitudes toward persons with serious mental illness and public support for gun control policies. *American Journal of Psychiatry, 170*(5), 494-501. doi:10.1176/appi.ajp.2013.13010014

Miller, M. (2004). *National Firearm Survey.* Ann Arbor, MI: Inter-university Consortium for Political and Social Research. doi:10.3886/ICPSR29681.v1

Montgomery, D., Mele, C., & Fernandez, M. (2017, November 5). Gunman kills at least 26 in attack on rural Texas church. *New York Times*. Retrieved from https://www.nytimes.com/2017/11/05/us/church-shooting-texas.html

Murphy, M. B. (1993). 1984 massacre in San Ysidro among deadliest. *Milwaukee Sentinel*, 7A. Retrieved from https://www.jsonline.com/

The National Firearms Act of 1934, 26 U.S.C. § 53 (1934).

Nickitas, D. M. (2013). With our voices and our votes: Advocating gun control. *Nursing Economic$, 31*(2), 57-98. Retrieved from http://www.nursingeconomics.net/cgi-bin/WebObjects/NECJournal.woa

Pfiffner, S., & Sutton, H. (2013). *The gun-free zone—a tool to prevent and reduce armed violence.* New York, NY: The United Nations.

Robbers, M. L. P. (2005). The media and public perceptions of criminal justice policy issues: An analysis of *Bowling for Columbine* and gun control. *Journal of Criminal Justice and Popular Culture, 12*(2), 77-95. Retrieved from https://www.albany.edu/scj/jcjpc/jcjpc_home.html

Safra, S. J. (2000). The amended Gun-Free School Zones Act: Doubt as to its constitutionality remains. *Duke Law Journal, 50*, 1-27. Retrieved from https://dlj.law.duke.edu/

Salva-Ramirez, M. A. (1995). The San Ysidro massacre ten years later: McDonald's actions spoke louder than words. *Public Relations Quarterly, 40*(1), 38-43. Retrieved from https://www.prsa.org/

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

Schildkraut, J., & Muschert, G. W. (2014). Media salience and the framing of mass murder in schools: A comparison of the Columbine and Sandy Hook massacres. *Homicide Studies, 18*(1), 23-43. doi:10.1177/1088767913511458

Shally-Jensen, M. (2011). *Encyclopedia of contemporary American social issues* (Vol. 2). Santa Barbara, CA: ABC-CLIO.

Shepherd, J., Gerdes, C., Nipper, M., & Naul, L. G. (2010). Are you ready?—lessons learned from the Fort Hood shooting in Texas. *Emergency Radiology, 18*(2), 109-117. doi:10.1007/s10140-010-0919-2

Serrano, R., Esquivel, P., & Knoll, C. (2015, December 17). Marquez and Farook plotted campus and freeway attacks, prosecutors allege. *LA Times*. Retrieved from http://www.latimes.com/local/lanow/la-me-ln-san-bernardino-marquez-20151217-story.html

Siegel, S., & Castellan, N. J., Jr. (1988). *Nonparametric statistics for the behavioral sciences* (2nd ed.). New York, NY: McGraw-Hill.

Sisak, M. R. (2010, May 10). *Judge: Banks incompetent can't be executed*. Retrieved from http://www.thetimes-tribune.com

Smith, E. L., & Cooper, A. (2013). *Homicide in the U.S. known to law enforcement, 2011 (NCJ 243035).* Washington, DC: U.S. Bureau of Justice Statistics.

Spector, P. E. (1981). *Research designs*. Thousand Oaks, CA: Sage.

Stark, C. A. (2001). Fundamental rights and the right to bear arms. *Criminal Justice Ethics, 20*(1), 25-27. doi:10.1080/0731129X.2001.9992096

Stell, L. K. (2004). The production of criminal violence in America: Is strict gun control the solution? *The Journal of Law, Medicine & Ethics, 32*, 38-46. doi:10.1111/j.1748-720X.2004.tb00447.x

Taylor, D. (2013). Gun-free zones: Weighing the pros and cons. *Parks & Recreation, 48*(4), 55. Retrieved from EBSCO Host Connection. (Accession No. 87715479)

U.S. Census Bureau. (2017). *Population estimates.* Retrieved from https://www.census.gov/quickfacts/fact/table/US/PST045217

U.S. Const. amend. II.

Utter, G. H., & Spitzer, R. J. (2016). *The gun debate: An encyclopedia of gun control & gun rights* (3rd ed.). Amenia, NY: Grey House.

Valenti, M., Ormhaug, C. M., Mtonga, R. E., & Loretz, J. (2007). Armed violence: A health problem, a public health approach. *Journal of Public Health Policy, 28*(4), 389-486. doi:10.1057/palgrave.jphp.3200150

Violence Policy Center. (2002). *License to kill IV*. Retrieved from http://www.vpc.org/studies/ltk4intr.htm

Warner, R. M. (2013). *Applied statistics* (2nd ed). Los Angeles CA: Sage.

Weaver, A., & Goldberg, S. (2011). *Clinical biostatistics and epidemiology made ridiculously simple.* Miami, FL: MedMaster.

Wolfgang, M. (1958). *Patterns in criminal homicide*. Philadelphia: University of Pennsylvania Press.

Yan, H., Stapleton, A., & Simon, D. (2017, November 7). Authorities: Texas church shooter had three gunshot wounds. *CNN*. Retrieved from https://www.cnn.com/2017/11/06/us/texas-church-shooting/index.html

Zegart, A. (2015). Insider threats and organizational root causes: The 2009 Fort Hood terrorist attack. *Paramaters, 45*(2), 35-46. Retrieved from http://www.strategicstudiesinstitute.army.mil/

Appendix A

Letter of Informed Consent

Letter of Informed Consent

Hello:

You are invited to participate in our survey on citizen's perceptions and experiences regarding using gun-free zones. This survey will also ask for your attitudes on firearms possession, including the carrying of firearms by law abiding citizens; additionally, the survey will ask general questions about your household. No names or identifying information will be asked and you may choose not to answer any question. You have been randomly selected and your opinions will help inform public policy on these important issues. This survey takes between 8 and 12 minutes. Your participation in this study is completely voluntary. There are no foreseeable risks associated with this project. However, if you feel uncomfortable answering any questions, you can withdraw from the survey at any point. It is very important for us to learn your opinions.

Note: A distinction should be noted between mandatory gun-free zones and voluntary gun-free zones. Mandatory gun-free zones include areas that have physical security inspections of individuals entering the area; for example: airports, many government buildings, many professional sporting events, and most courthouses. Voluntary gun-free zones are those locations where the law forbids the carrying of a firearm into the area; however, there are no physical inspections to ensure that weapons are not brought into the area. Examples of voluntary gun-free zones would include banks, places of worship, most schools and universities, and private establishments (businesses or restaurants) that forbid the carrying of firearms on their premises by visibly posting signs. Because, individuals must voluntarily choose not to bring weapons into the area, with the knowledge that they would be in violation of the law if a weapon were to be discovered on their person while inside the location or geographical area. For the purposes of this study the term 'gun-free zone' will refer to **voluntary** gun-free zones where no physical screening is present.

Your survey responses will be strictly confidential and data from this research will be reported only in the aggregate. Your information will be coded and will remain confidential. If you have questions at any time about the survey or the procedures, you may contact Sean Grier at 540-216-2401 or by email at the email address specified below.

Appendix B

Gun-free Zone Perceptions Survey

Gun-free Zone Perceptions Survey

Thinking about safety in your neighborhood…

1. On a scale of 0-10, with 0 being totally unsafe and 10 being extremely safe, how do you feel when you are out alone at night? COVARIATE!!!

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10

2. On a scale of 0-10, with 0 being totally unsafe and 10 being extremely safe, how safe do you feel in your own home? COVARIATE

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10

The next questions are about guns and other firearms. The word "guns" will be used to refer to all types of firearms.

Thinking about guns…

3. About how many households in your neighborhood do you think have guns?

- ☐ All
- ☐ Most
- ☐ Some
- ☐ Few
- ☐ None

4. On a scale of 0-10, with 0 being less safe and 10 being extremely safer, how would you feel if more people in your community were to own guns? GENERAL ATTITUDE

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ 10

5. Would you favor or oppose a law that limited the number of guns each person could legally buy to one gun per month? ATTITUD ABOUT GUN OWNERSHP

- ☐ Favor
- ☐ Oppose

The next questions are related to gun policies, and specifically, using gun-free zones. Gun-free zones are defined as: geographic locations or areas that strictly prohibit the carrying of firearms by any unauthorized individual (such as

schools, government buildings, churches, banks, national parks, etc.).

6. On a scale of 0-10, with 0 being no knowledge whatsoever and 10 being extremely knowledgably, how knowledgeable are you regarding your State's laws on gun ownership and use? COVARIATE

- ☐ 0
- ☐ 1
- ☐ 2
- ☐ 3
- ☐ 4
- ☐ 5
- ☐ 6
- ☐ 7
- ☐ 8
- ☐ 9
- ☐ 10

7. To the best of your knowledge, does your State allow the concealed carry of firearms by law-abiding citizens (Concealed Carry Licenses)?

- ☐ Yes
- ☐ No
- ☐ Unsure

8. In your opinion, should law-abiding citizens be allowed to carry concealed firearms in public?

- ☐ Yes
- ☐ No

9. In your opinion, do you agree or disagree that gun control measures reduce incidents of gun violence?

- ☐ Agree
- ☐ Disagree

10. Do you think people in your community should be allowed to bring their guns into…?

	Yes	No
Restaurants	□	□
College campuses	□	□
Sports stadiums	□	□

11. Do you agree or disagree with laws that ban the carrying of a firearm within certain geographic zones or areas (gun-free zones)?

☐ Agree
☐ Disagree

12. Do you feel that using gun-free zones reduces incidents of gun related violence?

☐ Yes
☐ No

13. Thinking of mass shooting incidents in the United States, do you believe that they mostly have occurred inside the confines of gun-free zones or outside the confines of a gun-free zone?

☐ Inside a gun-free zone
☐ Outside a gun-free zone

14. Does being located within the confines of a gun-free zone have any influence on your feelings related to safety?

☐ Yes, safer

☐ Yes, less safe
☐ No

15A. If safer, please rate your level of increased safety, with 1 being slightly safer and 10 being extremely safer…

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10

15B. If less safe, please rate your level of decreased safety, with 1 being slightly less safe and 10 being extremely less safe…

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10

15. When you are aware of a privately owned establishment (such as a store) that is labeled as a gun-free zone, does it influence your likelihood of visiting that location?

☐ Yes

☐ No

13A. If yes, please rate your increased likelihood of visiting the location, with 1 being slightly more likely and 10 being extremely more likely.

☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10

Thinking about crime in your community…

16. On a scale of 0-10, with 0 being totally unsafe and 10 being extremely safe, how would you feel if efforts were put in place to encourage law-abiding citizens to carry firearms in your community?

☐ 0
☐ 1
☐ 2
☐ 3
☐ 4
☐ 5
☐ 6
☐ 7
☐ 8
☐ 9
☐ 10

17. In your opinion, do you feel that an increase in law-abiding citizens

carrying firearms in your community would?

- ☐ Lower crime rates
- ☐ Have no impact
- ☐ Increase crime rates

Qualifiers

18. Have you ever been shot with a gun?

Yes	No
□	□

19. Were you shot in the past five years?

Yes	No
□	□

20. Do you, or does anyone else in your household, currently own any type of gun?

Yes	No
□	□

21. Do you, or does anyone else in your household, regularly carry a concealed firearm?

Yes No

□ □

22. In the past five years, has anyone used, displayed, or brought out a gun against you in a hostile manner, even if this event did not take place during the commission of a crime?

Yes No

□ □

23. In the past 5 years have you used, displayed, or brought out a gun in self-defense to protect yourself from a person or people?

Yes No

□ □

24. In the past 5 years, have you used, displayed, or brought out a weapon other than a gun in self-defense to protect yourself from a person or people? We are thinking about such weapons as a knife, mace, a club, a baseball bat, frying pan, or any other object.

Yes No

□ □

25. In general, do you agree or disagree with the positions of the National Rifle Association (NRA)?

☐ Agree
☐ Disagree

26. At the present time, are you a dues-paying member of the National Rifle Association (NRA)?

☐ Yes
☐ No

26A. If not, have you ever been a dues-paying member of the National Rifle Association (NRA)?

☐ Yes
☐ No

Ask everyone demographics section

27. Do you have any children under the age of 18 living in your household?

Yes No

□ □

28. What is the highest level of education you have completed?

☐ Elementary or some high school
☐ High school graduate or GED
☐ Some college or Associates degree
☐ Bachelors degree
☐ Graduate study or degree

29. In which of the following age groups do you belong?

☐ 18-29 years old
☐ 30-39
☐ 40-49
☐ 50-64
☐ 65 or older

30. Do you consider yourself…?

☐ White
☐ African American
☐ Hispanic (Latino)
☐ Asian or Pacific Islander
☐ American Indian, Native American, or Alaskan Native
☐ Some other race

31. Are you…?

☐ Male
☐ Female
☐ Transgender

32. Are you…?

☐ Single
☐ Married
☐ Not married, but living with a partner

33. Politically, do you consider yourself…?

- ☐ Conservative
- ☐ Liberal
- ☐ Moderate
- ☐ Libertarian
- ☐ Other

34. Which of the following best describes the total annual household income for all persons living in your household?

- ☐ Under $25,000 a year
- ☐ $25-$35,000
- ☐ $35-$50,000
- ☐ $50-$75,000
- ☐ Over $75,000

35. Which best describes the community that you live in? Is it a…?

- ☐ City
- ☐ Suburb
- ☐ Rural area