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**Investigating the Causes and Consequences of Mass Shootings in
America: A Historical Study**

**Dissertation Submitted in Partial Fulfillment of the Requirements for
Master's Degree in Literature and Civilization**

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Dedication

This dissertation is dedicated to the people who have supported us during our high education. I, Abdelbaki BENALI, dedicate this work to my parents and my wife who spare no effort to direct me during my academic career. May Allah reward them with goodness. I, Salah TRIKI, dedicate this paper to my beloved ones, my family, and to those who believed in us as well as my true friends.

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Abstract

Mass shooting incidents have grown in frequency and fatality and become a disturbing factor to the American well-being. This dissertation aims to investigate the multi-faceted causes and related consequences of mass shootings in America. Besides, it attempts to make a broader analysis of the existing preventive policies, intervention procedures that are intended to address mass shooting incidents in America. Many studies and surveys have been undertaken to identify the main factors behind the fatality and frequent occurrence of mass shootings. Additionally, many efforts have been done to examine the effective strategies and policies for addressing public firearm attacks in America. However, the unanswered question is whether the strategies implemented to address mass shooting acts are effective or there are other alternative approaches that need to be considered. This study employs descriptive and analytical methods aiming to explore the complex factors and multifaceted consequences of mass shootings then analyzing the prevention measures and mitigation strategies to effectively address this phenomenon. The research identifies key factors contributing to mass shootings, like mental health illness, easy access to firearms. It also examines the effects of public firearm attacks like mental health problems and social wellbeing. Mass shootings require prevention policy and mitigation strategies for example background checks and mental health support. This dissertation contributes to further research aiming to supply suitable solutions to address the issue of mass shootings in America..

Keywords: gun control, homicide, mass shootings, National Rifle Association.

List of Abbreviations and Acronyms

CDC	Center for Disease Control
CFR	Case Fatality Rates
DV	Domestic Violence
DVRO	Domestic Violence Restriction Order
ERPO	Extreme Risk Protection Order
FBI	Federal Bureau of Investigation
FFL	Federal Firearm Licensee
IPH	Intimate Partner Homicide
NICS	National Instant Criminal Background Check System
NIH	National Institute of Health
NRA	National Rifle Association

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General Introduction

1. Background of the Study

Over the past decades, more than 2,300 individuals have been the victims of mass shooting incidents which involve a firearm in the United States (Soni & Tekin, 2020). These deadly events, which disturb American wellbeing and safety, grow in frequency and fatality due to multifaceted and complex factors and therefore result in frequent victims and multiple destroying impacts on individuals and communities of the United States.

Historically, public mass shootings in America are traced back to the 1800s and have increased in frequency since 1966 (Schildkraut, 2021). These incidents of public gun violence took place in many parts of the United States including Texas University shooting in 1966, Kent State University shooting in 1970, the McDonald's shooting in 1984, Columbine High School shooting in 1999, Virginia Tech massacre in 2007, Santa Monica College shooting in 2013, music festival in Las Vegas in 2017, University of Virginia shooting in 2022, and University of Nevada, Las Vegas in 2023 (Ray & Chmielewski, 2024).

Although there is no specific definition to mass shootings, The Federal Bureau of Investigation (FBI) defined a mass murderer as someone who kills four or more people in a single incident (not including himself), typically in a single location (Krouse & Richardson, 2015). In recent years, the number of mass shooting incidents and fatalities has disturbingly continued in occurrence and prevalence. According to Fox and Levin (2021), over the 15 years from 2006 through 2020, there was a total of 448 mass killings, involving 567 offenders, 2,357 victims killed, and another 1,693 injured.

Mass shooting acts are related to complex and multifaceted factors. Mental illness is often stigmatized as a risk factor of mass shooting. There are also the availability and easy access to

firearms, substance abuse, anger issues, impulsive behaviors, discrimination in society and seeking media's attention to gain fame. (Ahmad et al, 2020).

Gun violence and mass shooting cause deaths and injuries, traumatic events, and impart a lasting mental effect on those that survive the event and the surrounding community (Dos Santos et al, 2022). Both direct and indirect exposure to mass shooting attacks can have different degrees of mental health outcomes and various psychiatric disorders, such as post-traumatic stress symptoms (PTSS), increased risk for mood, fear and substance use disorders, major depression, and anxiety disorder (Lowe & Galea, 2015).

The frequent occurrence and increasing fatality of mass shooting incidents in America raise discussions and influence researchers and professionals to conduct studies and approach strategies for instance background checks, red flag laws, ban high-capacity magazines, Health and mental health service providing, and gun laws reform. These efforts are intended to result effective policies, appropriate prevention and intervention measures to minimize the frequency of these incidents and to mitigate their harmful effects on individuals and communities in America.

2. Statement of the Problem

Many studies and surveys have been undertaken to identify the main reasons behind the frequent occurrence of mass shootings and efforts have been done to identify the effective strategies and policies for reducing public firearm attacks in America. This includes reforms of gun laws, the implementation of red flag orders, improvements of mental health services, the introduction of universal background checks, and the prohibition of high-capacity magazines. However, the unanswered question is whether the strategies employed to address mass shooting acts are effective, or there are possibly other alternative approaches that need to be considered and other required measures to be taken.

3. Research Questions and Research Hypotheses

In an attempt to achieve the research objectives of this dissertation, the following questions are asked.

- a. Which causes and key factors contribute to the occurrence of mass shootings in the United States of America?
- b. What are the multifaceted consequences of mass shootings on the American individuals and communities?
- c. Which preventive policies intervention measures are applied to address or limit the occurrence and prevalence mass shootings in the United States?
- d. What are the suggested policy recommendations and alternative procedures that could be implemented to address and mitigate the risks of mass shootings in America?

In accordance with the above-mentioned questions, a deeper understanding of the causes and consequences of mass shootings, along with a thorough analysis of existing preventive measures and intervention policies, including additional policy recommendations and alternative suggestions, is hypothesized to provide suitable results in combating this phenomenon in America.

4. Aims of the Study

This research aims to investigate the multi-faceted causes and related consequences of mass shootings in America. Besides, it attempts to make a broader analysis of the existing preventive policies, intervention procedures that are applied to address mass shooting incidents in America.

5. Significance of the Study

This research contributes to the existing research studies related to mass shooting violence in America. This contribution is provided through informing a deeper understanding of the causes and consequences of this phenomenon then analyzing the existing policy, strategies and measures utilized to address the issue. The research, also, attempts to fill the gaps and bridge the missing pieces available in the existing body of knowledge by providing new perspectives and offering solutions and better ways to address public shootings in the US. Data analysis and findings of this research could give directions to future studies that tackle mass shooting incidents by identifying unexplored areas or suggesting additional studies to build upon the current findings.

6. Research Methodology

This study employs a combination of descriptive and analytical methods. A descriptive method, in chapter one and two, allows us to create a comprehensive image of mass shootings in the US, including various contributing factors, the multifaceted consequences, and the existing preventive measures. An analytical method, in chapter three, helps us analyze the relationship between the key factors, evaluate the effectiveness of policies, and understand the broader social and economic impacts of mass shootings. To conduct this research, a qualitative method is used to provide a nuanced understanding of the context and meanings surrounding mass shootings.

7. Structure of the Study

This research is divided into three chapters. The first chapter explores the causes of mass shootings in America. The second chapter then investigates the consequences of this issue. Finally, the third chapter analyzes the preventive policy and intervention procedures implemented to address this phenomenon.

CHAPTER ONE

Causes of Mass Shootings in America

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Introduction

Mass public shootings are tragic incidents that disturb American wellbeing and safety. These deadly events grow in frequency and fatality due to multifaceted and complex factors and therefore result in frequent victims and multiple destroying impacts on individuals and communities of the United States. According to Fox and Levin (2021), over the 15 years from 2006 through 2020, there was a total of 448 mass killings, involving 567 offenders, 2,357 victims killed, and another 1,693 injured. The Federal Bureau of Investigation (FBI) defined a mass murderer as someone who “kills four or more people in a single incident (not including himself), typically in a single location” (Krouse & Richardson, 2015). In recent years, the number of mass shooting incidents and fatalities has disturbingly grown. Duwe (2020) found that such events constituted about 19 percent of all mass shooting incidents and 27 percent of all mass shooting fatalities from 1976 to 2018.

This chapter investigates the complex and multifaceted causes of mass shootings in America. In the first section, about political and legislative factors, there is a brief reference to the US gun history and Second Amendment laws then a demonstration of the multiple definitions of mass shootings, their trends, and characteristics. Besides, there is a focus on state and federal gun regulation considering no unique responsibility over firearm regulation is potentially a contributing factor of mass murder. Additionally, a discussion is performed on gun ownership, state law permissiveness, and polarized attribution of mass shootings. Finally, the unfunded and restricted mass shooting research factor is also discussed. In the second section about psychological and social factors of mass shootings, the discussion concentrates on mental health problems, personal grudges, and grievances for instance multiple motivations of the murders, copycat crimes, and contagion. Besides, there is a reference to other factors for instance income inequality, gun culture and lax gun regulation, domestic violence, media coverage, and subsequent shootings.

Exploring multiple factors of mass shooting phenomenon may help a great deal in having a broader comprehension of the issue and then may lay a solid ground for better mitigation policy and intervention procedures.

1.1 Political and Legislative Factors of Mass Shootings

1.1.1 Summary of US Gun History and Second Amendment

O'Neil (2024), a research expert covering historical data in Statista database platform, states that gun ownership has been protected nationally by the Second Amendment to the U.S. Constitution, since 1791. However, restrictions on aspects like ease of gun possession, public carrying, and the right of self-defense have varied on a state level.

Guns were introduced to the Americas with the arrival of European settlers, but the origins of modern gun culture in the U.S. is generally traced back to the "frontier spirit" that emerged in the 18th century. During this expansion, firearms were needed by settlers who had to hunt and fight off wild animals, as well as defend against indigenous populations as this expansion cut into their territory; because of this, several colonies legally required settlers to obtain firearms before migrating.

The towns most associated with this violence, like Dodge or Deadwood, had some of the strictest gun control policies; concealed carry was illegal and visitors were required to check their weapons with local law enforcement. By the time the frontier was declared "closed" in 1890, the need for firearms in hunting as well as self-defense was much lower; agriculture fulfilled most food demands, the native population had mostly been subjugated, and law enforcement replaced vigilante as well as frontier justice.

From colonial times until the Civil War, local militias played a key role in national defense alongside standing armies, although they were administered on a local or state level rather than centrally. Pre-independence, laws varied by colony, but often required households to possess at

least one firearm, and all able-bodied men were to be prepared for militia service. After the Revolutionary War, the founding fathers enacted frameworks that protected state militias, most notably with the Second Amendment: "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."

This amendment was proposed over concerns that a tyrannical government could use federal forces to seize power, but this would not be possible if faced with a much larger, decentralized militia.

The importance of the militia lessened over the 19th century, as heavy defeats to professional British forces in the War of 1812 highlighted the need for a stronger standing army, their role in controlling Black populations decreased after the Civil War, as well as state militias were mostly amalgamated into the National Guard in 1903. Throughout the 20th century there had been some debate over the interpretation of the Second Amendment and whether it was a "collective right" of the militia to bear arms or an "individual right" of all citizens to bear arms. In 2008, the Supreme Court ruled that the Second Amendment was an individual right, cementing its status as the most powerful legal precedent for the right to bear arms in the United States.

At the turn of the 20th century, gun manufacturers shifted their focus to urban markets and began using personal safety as the key selling point for their products. This saw a growth in handgun and pistol sales, although technological advances also saw new firearms make their way on to the market. The rise in gun crime led to higher rates ownership for protection purposes, and this seeped into other areas of society: guns became the most common method of suicide in the early-1900s, in addition to the murder of law enforcement peaked in the 1920s.

To limit gun violence, the National Firearms Act was introduced in 1934, followed by the Federal Firearms Act in 1938. These acts placed criminal, regulatory, and tax requirements on weapons favored by gangsters, for example machine guns, sawn-off shotguns, and silencers. By

this time, almost all states had also introduced laws restricting or outright banning the concealed carrying of weapons, as this was considered criminal practice. Gun crime then decreased during recovery from the Great Depression and remained low in the prosperous postwar years, before a second major crime wave started in the 1960s.

Numerous factors have been cited as contributing to this second wave, like the Baby Boomer generation's arrival into adolescence, economic downturns, growing income inequality, and a booming illegal drug market. Notable high-profile assassinations in the 1960s, including the Kennedys, Martin Luther King Jr., and Malcolm X, as well as the University of Texas tower shooting (the deadliest mass shooting at the time), helped push stricter gun control measures through. The Gun Control Act of 1968 then built on the acts of the 1930s by bringing further restrictions to interstate sales, banning mail order firearms, as well as preventing felons, drug users, and those found mentally incompetent from owning a gun.

Despite the drop in crime, the Columbine High School Massacre of 1999 marked a new era in discussions around gun control. Mass shootings have become more frequent since, especially school shootings, and the amount of media as well as political attention paid to these events has seen calls for improved regulation. The mass shooting phenomenon has also coincided with the rising share of military-style weapons on the market, which grew in popularity after the Federal Assault Weapons Ban was lifted in 2004. This marks the first time since the 1930s where high-capacity weapons are in demand, despite their use in some of the country's deadliest attacks resulted in several states implementing assault weapons bans. Most Americans support a nationwide ban on assault firearms; however the influence of the gun rights lobby in American politics means that no meaningful regulations have yet been passed by Congress.

Such widespread access to guns has also seen gun violence viewed more as a public health issue in recent years. Guns have recently become the leading source of death of children, and are already responsible for a large share of suicides in addition to accidental injuries. This

combination of factors has seen a proposed 28th Amendment to the Constitution, which would introduce federal age restrictions, waiting periods, and background checks for firearm purchases, as well as ban civilian ownership of assault rifles. However, many see this ambitious or unrealistic proposal, as it would require 75 percent of states to agree.

1.1.2 Definitions, Trends and Characteristics of Mass Shootings

Smart and Schell (2021) describe, in their study, different approaches for defining a mass shooting as well as discuss how using different definitions could influence estimates of mass shooting levels in addition to trends. Smart and Schell then summarize findings from the literature concerning the characteristics of mass shootings, including offender characteristics, types of firearm(s) used, as well as community-level relates.

1.1.2.1 Multiple Definitions of Mass Shootings

Smart and Schell (2021) maintain that the U.S. government has never defined mass shooting as a separate category of crime, and there is not yet a broadly accepted definition of the term. In the 1980s, the Federal Bureau of Investigation (FBI) defined mass murderer as someone who “kills four or more people in a single incident (not including himself), typically in a single location” (Krouse & Richardson,2015). In 2013, Congress defined mass killing as a single incident that leaves three or more people dead (Pub. L. 112-265, 2013). However, both definitions comprise many incidents that would not be considered as mass shootings. Additionally, neither definition was established for the purpose of data collection or statistical analyses. The FBI classification of mass murderer was established primarily with the intention of clarifying criminal profiling procedures (Ressler, Burgess, & Douglas, 1988), and the congressional definition was intended to illuminate statutory authority for the provision of U.S. Department of Justice investigatory assistance requested by state and local agencies (Pub. L. 112-265, 2013). As a consequence, various news outlets, researchers, as well as law enforcement agencies often use different definitions when reporting on mass shootings, which

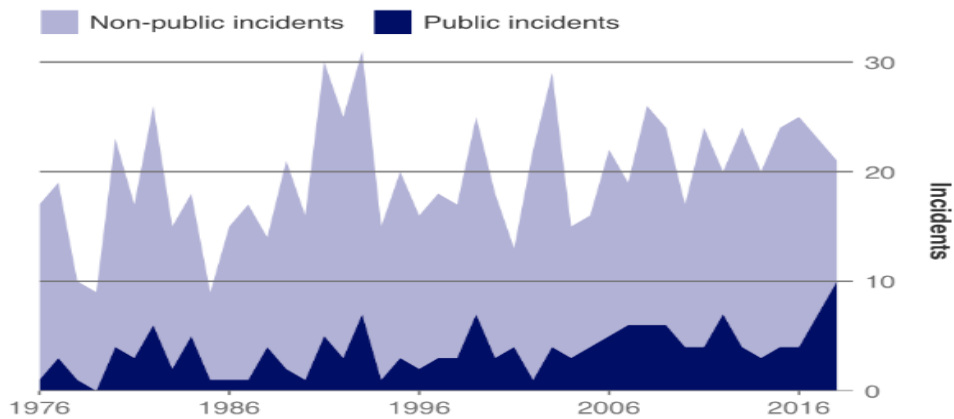
would complicate the understanding of mass shooting trends in addition to their connection to gun policy.

1.1.2.2 Trends in Mass Shooting Incidents and Fatalities

To determine the trends in Mass Shootings, Smart and Schell, (2021) state that, in 2014, the FBI issued a study demonstrating that “active shooting incidents” had increased at an average annual rate of 16 percent between 2000 and 2013 (Blair & Schweit, 2014). In contrast to the varied definitions for mass shootings, there is an agreed-upon definition among government agencies for active shooter: “an individual actively engaged in killing or attempting to kill people in a confined as well as populated area; in most cases, active shooters use firearm(s) and there is no pattern or method to their selection of victims” (U.S. Department Homeland Security, 2008, p. 2). Using a modified version of this definition to include incidents that had multiple offenders or occurred in confined spaces, Blair and Schweit (2014) found that active shootings had increased from only 01 incident in 2000 to 17 incidents in 2013. The FBI active shooting reports, which are now produced annually, identified 20 active shooter incidents in 2016, 30 incidents in 2017, 27 incidents in 2018, in addition to 28 incidents in 2019 (FBI, 2018g, 2019g, 2020).

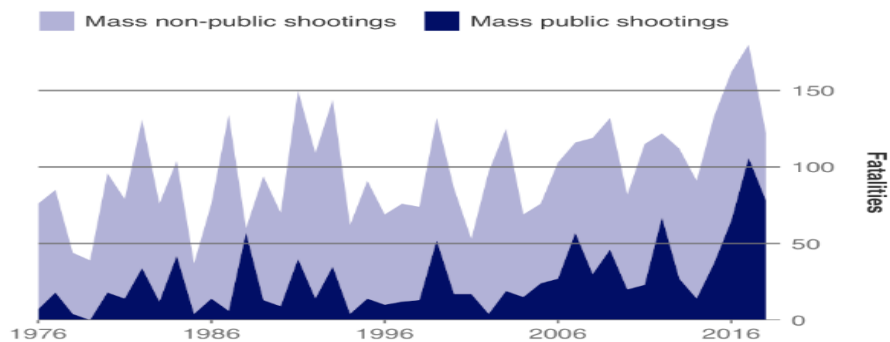
Figures 1 and 2 show trends in mass shooting incidents as well as mass shooting fatalities, using the data provided by Duwe (2020), who created his own data set aggregating across several of the sources described in this essay.

Figure 1.1: Trends in Mass Shooting Incidents (1976-2018)



Note. From *Mass Shootings in the United States*, By Smart and Schell (2021) (<https://www.rand.org/research/gun-policy/analysis/essays/mass-shootings.html>).

Figure 1.2: Trends in Mass Shooting Fatalities (1976-2018)



Note. From *Mass Shootings in the United States*, By Smart and Schell (2021) (<https://www.rand.org/research/gun-policy/analysis/essays/mass-shootings.html>).

Using Krouse and Richardson (2015)’s definition of “mass public shootings,” Duwe (2020) found that such events constituted about 19 percent of all mass shooting incidents in addition to 27 percent of all mass shooting fatalities from 1976 to 2018.

Although different choices about how to define a mass shooting and the period over which to calculate mass shooting trends have resulted in disagreement about whether the frequency of mass shootings has risen, there is clear evidence that the media’s use of the term mass shooting has increased significantly in recent decades (Roeder, 2016). Unfortunately, the trends one finds

in measuring mass shootings over time depend heavily on how the term is defined as well as the precise period over which the trend is detected, and these trends are likely to be biased by changes in the completeness of the underlying data sources over time. This ambiguity makes it challenging to draw firm conclusions about how these incidents have changed over time or how that information should be used when trying to understand the determinants, costs, and policy implications of mass shootings.

1.1.2.3 Characteristics of Mass Public Gunfire

Smart and Schell, (2021) found that numerous studies, essentially focused on mass public shootings, have sought to describe the characteristics of individuals who perpetrate mass shootings, evaluate characteristics of each mass shooting incident, and identify the behaviors as well as motivations that preceded each incident. Most of these studies are purely descriptive, not comparative, and thus should not be understood as providing evidence of whether specific individual-level or community-level characteristics are predictive of someone committing a mass shooting.

According to this literature (Capellan et al., 2019; Duwe, 2020), the perpetrators of mass public shootings in the United States have been overwhelmingly male (98 percent) and are most commonly non-Hispanic White (61 percent). In addition, they are most commonly younger than age 45 (82 percent); more specifically, 26 percent of mass public shooters from 1976 to 2018 were younger than age 25, 27 percent were aged 25 to 34, and 29 percent were aged 35 to 44. Relative to the overall U.S. population, mass public shooting offenders are much more likely to be male and are somewhat younger; relative to other homicide offenders, males and non-Hispanic Whites are overrepresented among mass public shooters, as well as mass public shooters are older. For comparison, of the overall U.S. population in 2019, approximately 49 percent was male, 60 percent was younger than age 45, and 60 percent was non-Hispanic White (U.S. Census Bureau, 2020). Of murderers in 2018 with known offender characteristics, 88 percent were men, 84 percent were younger than age 45 (38 percent younger than 25, 31

percentage 25 to 34, and 16 percent aged 35 to 44), and 42 percent were White (Hispanic ethnicity information was not provided) (FBI, 2019f).

Media coverage often links mass public shootings with severe mental illness (McGinty et al., 2014, 2016), but estimates of the prevalence of mental illness among mass public shooting offenders vary widely depending on the types of incidents considered and the methods used to define as well as identify mental illness.

Although most research supports that, overall, people with serious mental illness are overrepresented among mass public shooters (Duwe, 2020; Skeem & Mulvey, 2020), this does not imply that serious mental illness provokes mass shootings, just as we cannot conclude that being a young man causes mass shootings.

It is difficult to make comprehensive generalizations about the individual-level motivations of mass shootings. When mass shootings are broadly defined to include familicides, felony-related killings, and mass public shootings, the events include heterogeneous incident types that vary in terms of victim, offender, and incident characteristics (Fridel, 2017; Taylor, 2018). Felony-related killings show particular differences from familicides and mass public shootings.

1.1.3 State versus Federal Firearm Regulation

Having no clear mandate for state versus federal firearm regulation could be a factor for mass shooting prevalence. Thus, Harwood (2002) stated that despite extensive and often heated debate, a consensus on how to best regulate firearms remains far from being attained. The modern era of gun control debate occurred in New York in 1911 with the Sullivan Law, aimed primarily at youth groups in addition to organized crime. Since that time, the battleground for the debate has shifted between the state and federal governments. In 1968, after the assassinations of Robert Kennedy and Martin Luther King, Jr., the debate was centered in Washington, D.C. as well as eventually led to the enactment of the Crime Control Act of 1968.

When the government regulates activities of its citizens, a frequent question arises on whether states or the federal government should have the responsibility of the regulating. In

some cases, the judicial doctrine of federal preemption decides this issue. The doctrine is based upon the basic constitutional principle that in those areas where the founding fathers gave Congress the constitutional authority to regulate, Congress has the right to insist on one uniform set of national regulations. Once Congress exercises this right by enacting a comprehensive set of federal regulations, the states are constitutionally prohibited from adopting any regulations that are inconsistent with the federal regulations.

But federal preemption is elective. Congress can decide to occupy the field or not, as it sees fit. In other words, the federal government can choose whether or not to enforce its own laws in place of conflicting state laws. In many cases Congress has decided not to restrict a state's right to regulate.

The other side of the doctrine of federal preemption is the doctrine of states' rights, where each state has the right to regulate certain activities free from federal interference. The doctrine of states' rights has roots in the United States Constitution. Although surprising to many in this era of a big federal government, the Constitution provides that the federal government is a government of limited powers. Unless the Constitution gives the federal government authority to act, the power to do so resides exclusively with the people and their respective state governments.

In the framework of states' rights, it is worth noting that the Second Amendment has often been viewed as restricting the federal government's ability to control the state militia, the predecessor to the modern National Guard. In the late eighteenth century, there was great distrust among the states of professional armies organized by the federal government. The drafters of the Bill of Rights feared that a strong federal army would engage in the same abuses as the British Army. As a result, it has been argued that the Second Amendment was adopted to preserve and protect the local militia, which had fought so well in the Revolutionary War.

Harwood (2002) conclude that there is no clear mandate for state versus federal regulation of firearms. Although constitutional principles of federal preemption as well as states' rights

could in theory decide the issue, they are unlikely to do so. More likely, these constitutional principles will be used to support arguments in the debate over gun control but will not actually determine the outcome of the debate. There simply does not appear to be the political will or constitutional precedent for Congress or the Supreme Court to decide that firearm regulation will be the exclusive province of either the state or the federal government.

1.1.4 Gun Ownership and State Law Permissiveness

Despite gun laws that have been enacted in varying degrees from each state across the country, mass shooting is an obvious problem that continues to divide America. Reeping et al. (2019) estimate that previous studies have found that more permissive statewide gun laws are associated with higher levels of gun homicide and gun suicide, although none of these studies considered whether state gun laws in general were associated with mass shootings. Previous studies have found that gun ownership is associated with higher levels of gun assault as well as gun homicide, although none of these studies considered whether state gun ownership in general was associated with mass shootings.

Gun laws and gun ownership influence mass shooting events in the U.S.A is not fully understood. Therefore, A cross sectional, time series analysis was conducted to broadly examine whether restrictiveness or permissiveness of state gun laws and state gun ownership were associated with mass shootings.

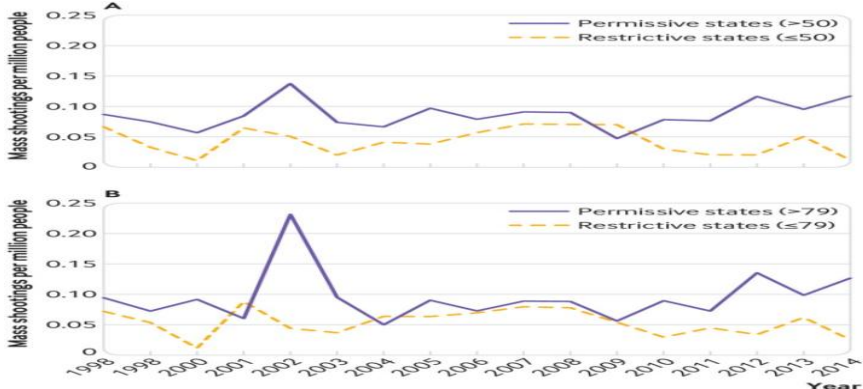
As a method of study, Reeping et al. (2019) utilized the 1998-2015 edition of the Traveler's Guide to the Firearms Laws of the Fifty States to obtain the independent variable of interest, an annual restrictiveness-permissiveness scale of US gun laws for each state.

The analyses show that US state gun laws have become more permissive in recent decades, and that a growing divide in rates of mass shootings appears to be emerging between restrictive in addition to permissive states.

Figure 1 shows that a growing divergence was noted in 2010 with a decreasing rate of mass shootings in restrictive states and an increasing rate of mass shootings in permissive states.

Scatterplots of gun law restrictiveness-permissiveness scores, gun ownership, as well as rates of mass shooting show positive and significant correlations between gun ownership and rates of mass shootings (Pearson’s r 0.42, $P=0.003$), gun law restrictiveness-permissiveness and rates of mass shootings (0.38, $P=0.007$), and gun law restrictiveness-permissiveness and gun ownership (0.79, $P<0.001$) in addition to rates of mass shootings over time in restrictive versus permissive states for a restrictiveness - permissiveness score of 50 (A) and 79 (B). Years 1998-2014 were included because of the lag of the permissiveness score.

Figure 1.3: Rates of Mass Shootings over Time in Restrictive Versus Permissive States



Note. From *State gun laws, gun ownership, and mass shootings in the US: cross sectional time series*, Reeping et al, (2019) (<https://www.bmj.com/content/364/bmj.l542>)

Reeping et al. (2019) found that the permissiveness or restrictiveness of state gun laws is associated with the rate of mass shootings in the US. States with more permissive gun laws and greater gun ownership have higher rates of mass shootings, and a growing divergence is noted in recent years as rates of mass shootings in restrictive states have decreased as well as those in permissive states have increased.

1.1.5 Polarized Attributions of Mass Shootings

Division and disagreement about the causal attributions of mass shooting in America could potentially provoke more frequent and fatal gun tragedies. Therefore, Haider-Markel and Joslyn (2011) employed motivated reasoning and attribution theory to understand causal attributions of three mass shooting incidents: 2007 Virginia Tech shootings, the 2009 Fort Hood shootings, in

addition to the 2011 Tucson, Arizona shootings. These three mass shooting attacks received extensive national media coverage. Each case is dramatically different in terms of context as well as the perceived motivations of the gunmen.

Unlike the first two cases, in the Tucson shooting was carried out primarily to assassinate one-person, Representative Giffords. In the other cases the gunman appeared to try and kill and wound as many people as possible to send a message of angst to a broader population.

Haider-Markel and Joslyn (2011) begin with a review of motivated reasoning and derive several hypotheses for the determinants of causal attributions. They then test hypotheses using national survey data recorded immediately following each of the three mass shootings. The data include questions about blame for the tragedies. The results expose a substantial partisan divide on the causes of the tragedy and considerable differences between the least and most educated respondents as well. However, Haider-Markel and Joslyn (2011) show that educational differences disappeared among Republicans but amplified among Democrats. Thus, the outcome is considerable polarization among the most partisan educated respondents.

As a conclusion, this research sought to understand the public's causal attributions about three shooting tragedies. Drawing from theories of motivated reasoning as well as attribution, Haider-Markel and Joslyn (2011) offered two distinct motives that compel the reasoning process toward directional and accuracy goals. Both researchers approximated these motives with measures of party identification and education in addition to their analysis of individual level survey data from national samples of American adults suggests several important conclusions.

First, in the analysis, Haider-Markel and Joslyn (2011) found that both partisanship and education influence the probability of selecting an external or systematic attribution for each of the mass shootings. Specifically, Democrats were more likely than Republicans to attribute the tragedies to larger social in addition to political factors.

Second, they found that significant division existed among the educated public when the data was split by party identification. For example, the effects of education were robust as well as large among Democrats but disappeared among Republicans.

Third, additional individual characteristics might reveal potential predispositions that also condition directional motivations associated with partisanship. Meanwhile, gun ownership, which in most cases was associated with making an individualistic attribution, only influenced the likelihood that Democrats would make such an attribution and not Republicans.

Finally, Haider-Markel and Joslyn (2011)'s study highlights the benefit of using motivated reasoning to understand the potential processes that individuals employ in making attributions. Their cases examine attributions about tragic mass shootings, but the applications need not be limited to tragic events, nor simply to examine systematic versus individualistic attributions. Indeed, there appears to be great utility in more closely linking motivated reasoning to highlighting the more nuanced portions of attribution theory in addition to their understanding of attributions.

1.1.6 Unfunded and Restricted Mass Shooting Research

In *Journal of Social Change*, G. Cowan and F. Cole (2020) state that mass shootings are becoming more common place in the American society. Despite this increase in frequency, research on mass violence has moved slowly due to ceased federal research funding. Counselors and other mental health professionals find themselves at the forefront of this issue due to the contentious debate surrounding the intersection of mental health issues as well as mass shootings. Therefore, they aimed to increase awareness of the cause of this dearth of research. However, due to the scant empirical research on mass shootings is limited (Brady, 2019).

One prominent reason for the scarcity of research on mass violence is the Dickey Amendment, which for the past 20 years has prohibited the National Institutes of Health (NIH)

and the Centers for Disease Control (CDC) from studying gun violence (Brady, 2019; Rostron, 2018). The ban was put in place after the CDC funded a study that confirmed that firearms in homes increased the risk of homicide (Kellermann et al., 1993). In response, the National Rifle Association (NRA) allied with Arkansas representative Jay Dickey in 1996 to include a provision in a spending bill (Rostron, 2018) that stated “none of the funds made available for injury prevention and control at the Centers for Disease Control and Prevention are perhaps used to advocate or promote gun control” (Public Law 104-208, 1996, p. 245). At that time, the \$2.6 million in funds for gun violence research was appropriated for studies on traumatic brain injury, and all CDC research on gun violence was formally halted (Rostron, 2018).

The Dickey Amendment eventually halted funding for the NIH as well and immobilized all gun violence research following the NIH’s study in 2009 that explored the link between gun possession and gun assault (Rostron, 2018). Due to this, Congress denied President Obama’s request to allow funding for gun violence research, and these studies continued to be on hold until the Parkland school shooting in 2018 (Departments of Labor, Health and Human Services, and Education, and Related Agencies Appropriations Act, 2018).

G. Cowan and F. Cole (2020) conclude that because of scant research on mass violence, especially in the counseling field, counselors lack clarity regarding best practices for preventing and intervening in a mass shooting. Without filling these research gaps, the country remains in imminent danger of suffering from these shootings time and again. As society looks to us in this time of need, the counseling profession has the duty and responsibility to find ways to identify and help those who may be prone to these acts of violence. However, without more evidence-based research, the community is at a loss for the direction to take in recognizing the signs as well as treating the symptoms of violence. Every effort should be made to advocate for research funds and then conduct research in the areas discussed above so that society becomes safer.

1.2 Psychological and Social Factors of Mass Shootings

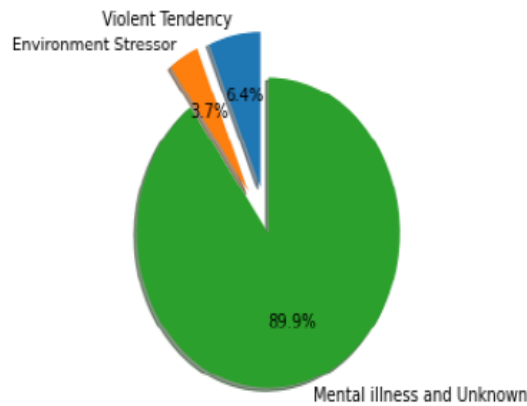
1.2.1 Mental Health Problems

In an attempt to examine whether shooters with records of mental illnesses kill more people compared to mentally non-ill counterparts, Wu (2021) states that mass shooting has taken an epidemic proportion in the United States, in recent years. The reason is the convergence of factors like a culture of gun ownership centered on the Second Amendment, the availability of guns, the virtually absent regulation of gun ownership.

Wu (2021) conducts a study, to explore risk factors of mass shootings like depression and schizophrenia, which might increase mass shootings' incidences. In the research, he applies Python packages for example Seaborn, NumPy, and Matplotlib to visualize as well as categorize various mental illnesses that shooters experience. Independent samples' T-test was employed to observe whether shooters' prior signs of mental illness were related to the number of people they tried to kill.

To demonstrate his results, Wu (2021) provides figures as shown below to visualize and categorize the various mental illnesses as well as help in the calculation of various factors that are involved. Figure 1 shows the factor that might affect the shooters is predominantly mental illness and unknown (89.9%), followed by violent tendency (6.4%) and environment stressor (3.7%). From the pie chart that shooters are predominantly mentally ill can be estimated.

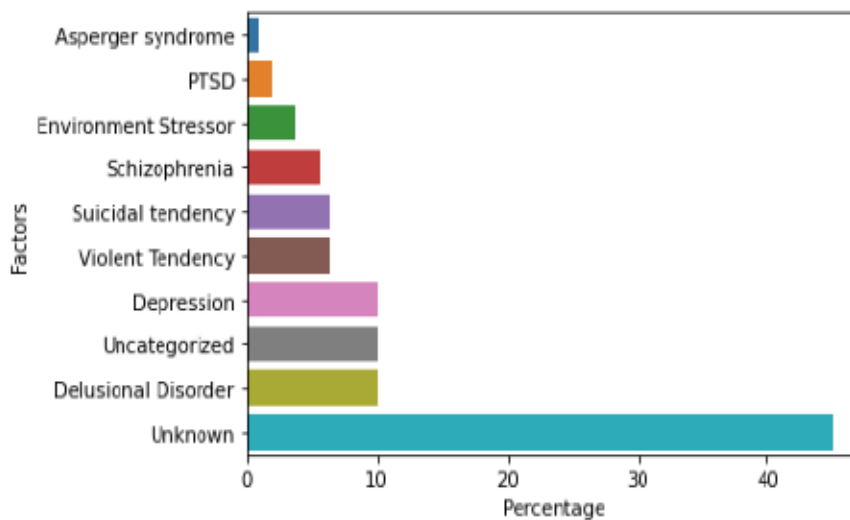
Figure 1.4: Factors that Might Affect Shooters Commit Mass Shootings



Note. From *Mental Illness and Mass Shootings: A Quantitative Treatment of Risk Factors and Mitigation Strategies*, Wu (2021) ([http://creativecommons.org/licenses/by-nc/4.0/.](http://creativecommons.org/licenses/by-nc/4.0/))

Breaking figure 1 down further, the highest percentage of factors that might affect the shooters to commit a mass shooting in figure 2 is unknown with roughly 45%, followed by delusional disorder (10.1%), uncategorized (10.1%), depression (10.1%), violent tendency (6.4%), suicidal tendency (6.4%), schizophrenia (5.5%), environment stressors (3.7%), PTSD (1.8%), and Asperger syndrome (0.9%). Based on these, the major mental illness factors of committing mass shootings are depression and delusional disorder. Skeem and Mulvey point out that severe mental illnesses like schizophrenia, bipolar disorder, and major depression often impair the body's ability to function or perceive reality, and some mental conditions like delusions as well as hallucinations can directly provoke violent behavior. Moreover, based on the ECA study done by Swanson, the annual incidence of violence rate in people without mental illness or substance abuse was 2 percent, compared to 7 percent in people with mental illness. Accordingly, it can be assumed that people with mental illness are more possible to be involved in violence than people without mental illness.

Figure 1.5: Mental Illness or Other Factors that Might Affect Shooters



Note. From *Mental Illness and Mass Shootings: A Quantitative Treatment of Risk Factors and Mitigation Strategies*, Wu (2021)

As a conclusion, Wu (2021)'s study aims to explore the factors that might drive shooters to commit mass shootings and suggest mitigation strategies to ensure public safety. Greater knowledge of the relation that exists between shooters and mental disorders will probably help to provide a stronger legal basis for the possession of firearms by the mentally ill.

With respect to public safety, it is important to understand whether and how different pathologies affect criminal intents and actions. Understanding the relationship between mental illness and shooters could result in better regulation of mentally ill people as well as gun possession. Being aware that a shooter's mental illness history is essential and can influence how they behave is the best way to ensure that guns are only issued to responsible individuals.

1.2.2 Personal Grudges and Grievances

According to Fox and Levin (2021), mass murder, especially including a firearm, has been a subject of increasing interest among criminologists over the past decade. Lacking an existing and reliable data resource for studying these crimes, several organizations have launched their own database initiatives with, unfortunately, little consensus on definition of the issue. As a result, there is confusion regarding the nature as well as trends of such events. Fox and Levin

rely for their research on the Associated Press/USA Today/Northeastern University Mass Killing Database, which provide the widest coverage of incidents in the U.S. with four or more victim fatalities, regardless of location, situation, or weapon. They detailed a motivational typology of mass murder and identified other factors like copycat crimes and contagion. Finally, they considered the potential effects of certain policy responses related to media coverage, mental health services, in addition to gun restrictions on the prevalence of mass killing.

1.2.2.1 Typology of Motivations in Mass Murderers

Fox and Levin (2021) assume that of the many ways one might classify firearm incidents, a motivation-based typology with five categories—power, revenge, loyalty, terror, and profit—is particularly useful. Like most typologies, of course, the categories are not mutually exclusive; some mass killings involve a mixture of motivations.

A large number of mass killings reflect a theme in which power and control are dominant. In its most extreme form, the so-called “pseudo-commando” has a passion for symbols of power, including assault weapons, and could even dress in battle fatigues in preparation for an armed assault. Some killers regard mass murder as an opportunity to go from obscurity or outright rejection to a position of importance or power, even if posthumously. They do what they believe is necessary to seize the center of attention—to make the headlines, dominate the news cycle, and be deified by admirers on blogs as well as websites—essentially to go down in infamy.

Many mass killers are motivated by revenge, either against specific individuals, particular categories or groups of individuals, or society at large. Most commonly, the murderer seeks to get even with people he knows—with his estranged wife and all her children or the boss and all his employees. Some revenge-motivated mass killings are instead inspired by a grudge against an entire class of individuals—based, for example, on race, religion, gender, or sexual orientation—viewed as being responsible for the killer’s difficulties in life (Levin & Nolan, 2017). The least common form of revenge killing involves an assailant who sees society in

general as corrupt and unfair, even suspecting the existence of a wide-ranging conspiracy blocking success.

A few mass killers are inspired by a distorted sense of love and loyalty—a desire to save their loved ones from misery and hardship. Certain family massacres involve what Frazier (1975) identified as “suicide by proxy.” Typically, a husband/father is despondent over the fate of the family unit and takes not only his own life but also those closest to him to protect them from the pain and suffering. Some mass killings are terrorist acts in which the perpetrators hope to “send a message” through murder.

As indicated by Fox and Levin (2021), the motivations for mass murder are sometimes multi-faceted. The Oklahoma City bombing, for example, combined elements of terror and revenge. Indeed, it is not surprising that acts of violence so extreme as mass murder can be fueled by a deadly compound of irritants and precipitants.

1.2.2.2 Copycat Crimes and Contagion

Fox and Levin (2021) claim that there are instances when the actions of a mass killer whose murders are widely publicized may precipitate, at least in part, others to carry out similar assaults. The potential for such copycat behavior is especially likely if an impressionable individual identifies with the role model’s situation, motivation, and justification. Indeed, there are countless cases of would-be assailants who came to admire the shameless acts of infamous murderers like Dylan Klebold and Eric Harris who perpetrated the 1999 Columbine massacre or Dylann Roof who slaughtered parishioners at a church in Charleston, South Carolina.

Concerned that extensive coverage of mass shootings could inspire copycats, some members of the news media, law enforcement, and the academic community have promoted the so-called “No Notoriety” campaign, asking that the names as well as images of mass shooters be afforded limited exposure, if not withheld altogether (Lankford & Madfis, 2018).

It is certainly appropriate for the news media to relay the basic facts about an assailant as it is a significant part of the story. Plus, it is more the act, not the actor, that others with a similar mindset might applaud and find inspirational. Many Americans can remember, for example, what took place at a Pittsburgh synagogue, a Parkland, Florida high school, and a university in Blacksburg, Virginia; Far fewer can recall the assailants' names or recognize their faces. Also, there are very few mass killers who could be considered iconic.

Fox and Levin (2021) consider that countless Americans may benefit from greater access to treatment for various psychological ailments, from minor to severe. However, mass murderers generally are not mentally ill. According to Brucato et al. (2021), only 11% of mass murderers (and 8% of mass shooters) exhibited symptoms of serious mental illness. Indeed, someone so confused, disoriented, or out of touch with reality would have difficulty planning, preparing for, and executing a deadly attack. More importantly, mass murderers, as indicated, tend to externalize blame for their failures, seeing themselves as the victim of injustice, not as weak or infirmed. They want fair treatment from others, not treatment in the form of counseling. If improving the mental health system is a worthy goal, then it need not be tied to mass killing. That only adds to the stigma of mental illness by conflating it with mass murder.

1.2.3 Income Inequality

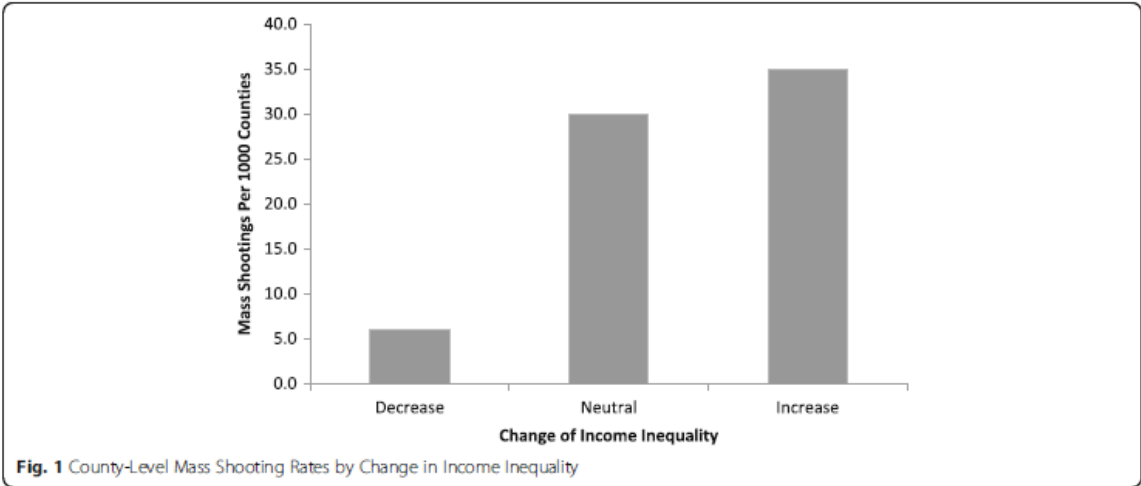
As according to Kwon and Cabrera (2019), there is little research on whether the recent growth of income inequality in America is associated with the rise of mass shootings. Thus, the connection between income inequality and mass shootings across counties in the United States need to be explored.

Kwon and Cabrera (2019) believe that one of the more noteworthy changes in developed economies over the past few decades is the dramatic growth of income inequality. According to the United Nations, the increasing bifurcation of national income is particularly acute in the United States, where the top 0.1%'s income increased by 4.0% annually between 1980 to 2011.

For their study, Kwon and Cabrera (2019) used panel regression techniques where mass shootings over a 10 year-period are regressed on the first-difference of independent variables measured during the years 1990 to 2000 and 2000 to 2010, respectively. The data are thus composed of county-decade observations.

Figure 1 provides information on mass shootings. These data are presented by grouping counties together by their level of change in income inequality. According to the data, during each time-period examined, counties experiencing a decrease of income inequality witnessed a mass shootings rate of 6 per 1000 counties, counties with a negligible change of income inequality experienced 30 per 1000, and counties with an increase of income inequality observed 35 per 1000. These data are useful as they provide preliminary descriptive evidence that recent inequality dynamics may be associated with mass shooting patterns at the county-level.

Figure 1.6: County-Level Mass Shootings Rates by Change in Income Inequality



Note. From *Income inequality and mass shootings in the United States*, by Kwon and Cabrera (2019) (<https://doi.org/10.1186/s12889-019-7490-x>)

Kwon and Cabrera (2019) demonstrate that there is strong evidence in this study to suggest the recent growth of income inequality is significantly associated with mass shootings in the United States. Specifically, this evidence indicates that a one standard deviation increase in the growth of income inequality augments the number of mass shootings by 0.43 to 0.57. In contrast, there is no evidence that poverty rates are associated with these events.

1.2.4 Gun Culture and Lax Gun Regulation

Lemieux (2014) conducted a study to examine the merit of two propositions related to firearm assaults: first, gun violence and mass shootings are a cultural artifact (gun enthusiast perspective); second, gun violence and mass shootings are more prevalent due to lax regulations (pro-gun control perspective). In other words, gun laws and rules are not strictly enforced.

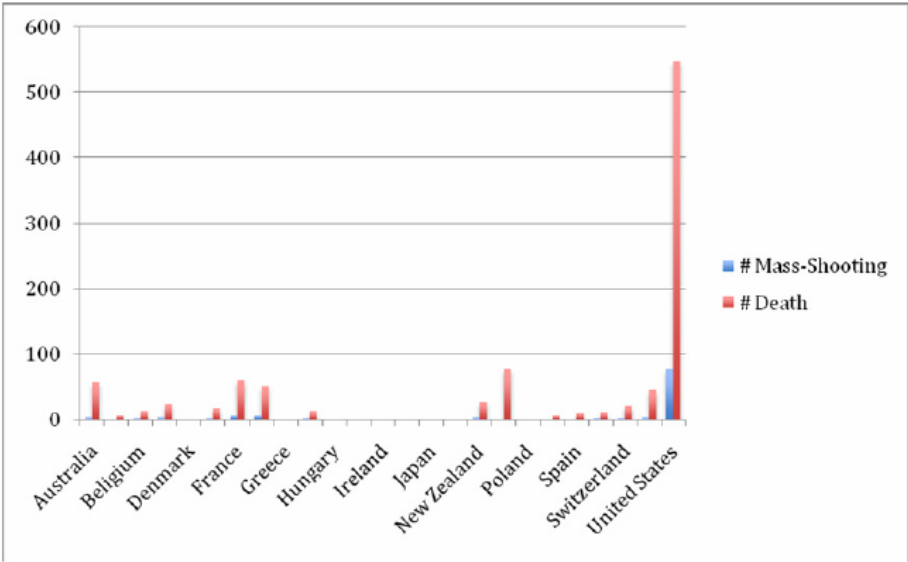
In December 2012, after the mass shooting at Sandy Hook Elementary School in Newtown, Connecticut, the debate on gun control reached a peak with the creation of a presidential task force charged with recommending solutions to the problem of public mass shootings and, more broadly, to gun violence. During these discussions, two main positions were opposing each other. One side argued for the protection of the Second Amendment and asserted that gun violence in America is mainly a problem of violent culture with calling for more situational solutions (e.g., armed guards in public places, school, etc.). The other side of debate called for more enforcement and greater restriction for gun accessibility (background checks) and the restriction of certain types of military style weapons and large ammunition capacity (Faria, 2013).

These two opposing positions on gun control certainly have theoretical foundations, and each side's merits need to be scrutinized through a multi-level approach. Lemieux (2014)'s analytical design is based on a multi-level, cross-sectional analysis, which includes the macro level (cross-national comparison), the meso level (cross-state comparison), and the micro level (case comparison). From the macro level by cross-national analysis, results indicate that the mass-shooting phenomenon is not limited to the United States but has also appended in several other industrialized countries.

Figure 1 in the appendix provides an overview of the mass shootings that have occurred between 1983 and 2013 in 25 advanced nations comparable to the United States. These shootings varied from 4 to 77 deaths. The first striking observation emerging from Figure 1 is that the

number of mass shootings and related casualties in the United States far surpasses any of the other individual countries included in the study during that same period of time.

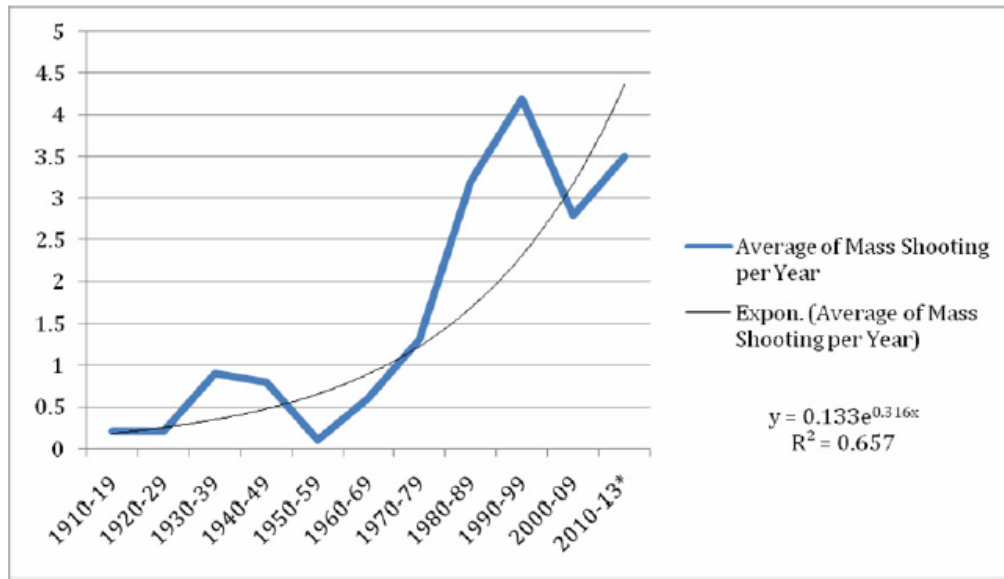
Figure 1.7: Distribution of Mass shootings and Related Casualties in 25 Countries (1983-2013)



Note. From *Effect of Gun Culture and Firearm Laws on Gun Violence and Mass Shootings in the United States: A Multi-Level...* by Lemieux (2014) (<https://www.researchgate.net/publication/268804619>)

Regarding the micro level with case comparison analysis, this section examines the mass shooting incidents that happened in the United States by comparing cases that have been identified in the media and in government reports. First, as it has been mentioned in the introduction, the frequency of public mass shootings has continually increased since 1910. Figure 2 shows that the increase follows a positive trend with an R-squared exponential curve fit of 0.66, representing an increase in the annual average mass shootings over the past ten and a half decades (2010- mid 2013). The data has been aggregated from the work of Duwe (2007) and Kessler (2013). The absolute number of incidents per decade was transformed into a per-year average to better represent the intensification of mass shootings in the last half of the decade of the graph (2010-2013).

Figure 1.8: Annual Average of Mass Shooting Aggregated by Decade (1910-2013)



Note. From *Effect of Gun Culture and Firearm Laws on Gun Violence and Mass Shootings in the United States: A Multi-Level...* by Lemieux (2014) (source: Duwe 2007; Kessler 2013) (<https://www.researchgate.net/publication/268804619>)

Lemieux (2014)'s research has demonstrated throughout a series of analyses at the international and national levels, which shows that the best predictor of death by firearms is the possession of guns (gun ownership). In other words, gun access predicts death by guns; further, this result is trans-culturally consistent, meaning that this finding is true amongst 25 advanced democracies and 50 states in the United States regardless of the cultural background. As to the culture of violence and death by guns relationship claim, this is mainly invalidated at the international level but partially validated in the Southern region of United States by the murders by firearms rates. Also, there is no connection between gun culture – or the absence of thereof – and the occurrence of mass shooting.

However, in the United States, the gun culture prevailing in the Southern region of the United States is associated with and predicts the rate of murders by firearms. On the other hand, both international and national multivariate analyses show that gun control legislation reduces overall fatalities related to firearms.

1.2.5 Domestic Violence

Geller et al. (2021) claim that recent research has not extensively focused on the role of domestic violence (DV) in mass shootings in the United States. To explore this role, Geller et al. used 2014–2019 mass shooting data from the Gun Violence Archive. They indexed their data by year and mass shooting and collected the number of deaths and injuries. They reviewed news articles for each mass shooting to determine if it was 1) DV-related (i.e., at least one victim of a mass shooting was a dating partner or family member of the perpetrator); 2) history of DV (i.e., the perpetrator had a history of DV but the mass shooting was not directed toward partners or family members); or 3) non-DV-related (i.e., the victims were not partners or family members, nor was there mention of the perpetrator having a history of DV). They conducted descriptive analyses to summarize the percent of mass shootings that were DV-related, history of DV, or non-DV-related, and analyzed how many perpetrators died during the incidents. Besides, they conducted one-way ANOVA to examine whether there were differences in the average number of injuries or fatalities or the case fatality rates (CFR) between the three categories. One outlier and 17 cases with unknown perpetrators were excluded from the current main analysis.

Federal law prohibits purchase and possession of firearms for those who have been convicted of a misdemeanor crime of DV (Gun Control Act of 1968, 18 U.S.C. § 922(g)(9) 1968), yet misdemeanor crimes vary by state and some states do very little to prevent DV perpetrators from purchasing firearms nor do they take steps to remove guns from perpetrators who become prohibited. The relationship between DV and firearm violence is well established. Over half of all intimate partner homicides (IPH) are by firearm (Fox & Fridel 2017; Zeoli 2018). While firearms are used in intimate relationships to kill, they are also used to threaten and intimidate. Around 4.5 million women in the U.S. have been threatened with a firearm, in addition to nearly 1 million women have been shot or shot at by an intimate partner (Sorenson & Schut 2018).

Geller et al. (2021) concluded that domestic violence, whether directly related or through a perpetrator's history, plays an important role in mass shootings in the United States. DV-related mass shootings were associated with fewer casualties but a higher case fatality rate CFR; fewer victims survived the injuries sustained in a mass shooting that was associated with DV, highlighting the lethality of these events. Increased focus should be placed on disarming and restricting access to guns by perpetrators of intimate partner violence IPV and domestic violence DV.

1.2.6 Media Coverage and Subsequent Shootings

Jetter and Walker (2018) estimate that mass shootings have become a gruesome regularity in the US: Columbine (1999), Virginia Tech (2007), Sandy Hook (2012), Orlando (2016), Las Vegas (2017), and Parkland, Florida (2018), are just some of the deadliest examples. To explain the frequent occurrence of such tragedies, one hypothesis put forth by criminologists, psychologists, and popular commentators. The hypothesis suggests that the media coverage of mass shootings could systematically encourage future perpetrators to commit gun attacks. For example, the criminology professor Adam Lankford argues that “there is no doubt that there is an association between media coverage that these offenders [mass shooters] get and the likelihood that they will act” (Christensen, 2017).

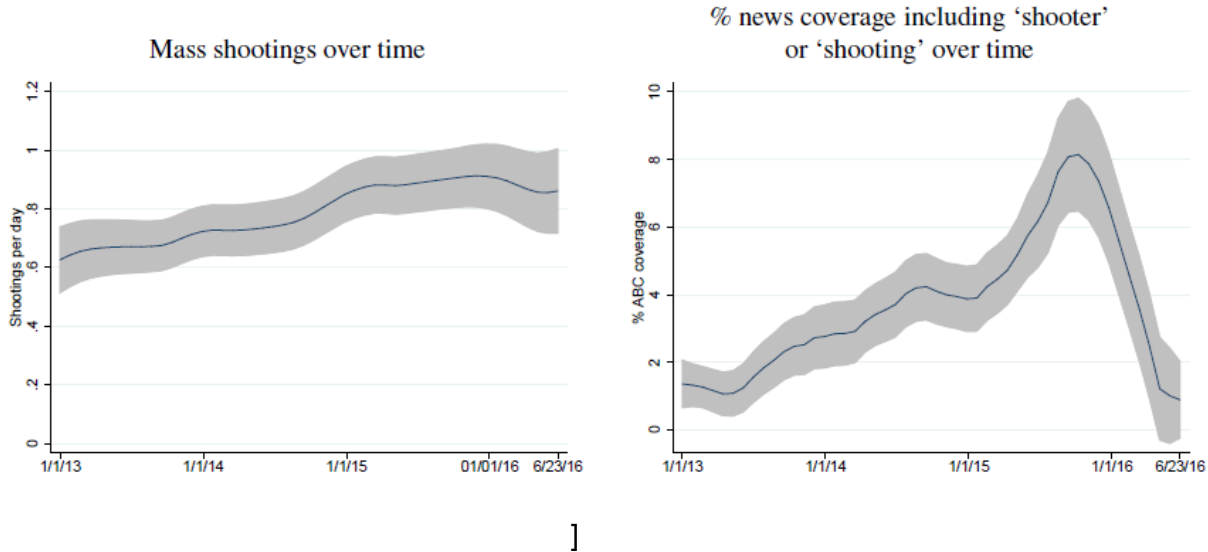
In Jetter and Walker (2018) extended recently emerging empirical evidence studying the power of the mass media in influencing a range of outcomes. To illustrate the developments of mass shootings and Jetter and Walker (2018)'s media coverage variable, Figure 1 visualizes time trends throughout their sample period. The left graph documents the persistent rise in the number of shootings per day, whereas the right graph shows that ABC news segments mentioning the terms shooter or shooting consistently increased until the end of 2015 before falling again to 2013 levels.

This fall in coverage since the beginning of 2016 is likely owed to the increased media coverage dedicated to the US election campaign. Indeed, tracing news segments including

respective terms show a continuous rise from early 2016 onwards until the end of the sample. All results are consistent when excluding 2016 from their sample.

Figure 1 shows that any empirical analysis of mass shootings and the associated media coverage needs to account for time trends.

Figure 1.9: Mass Shootings over Time



Note. From *The Effect of Media Coverage on Mass Shootings*, Jetter and Walker (2018) (<https://www.iza.org/publications/dp/11900/the-effect-of-media-coverage-on-mass-shootings>)

Jetter and Walker (2018)'s findings consistently suggest that media coverage systematically causes future mass shootings. These findings are consistent when accounting for weekday- and month-fixed effects, time trends, as well as characteristics of preceding mass shootings. A range of robustness checks support these conclusions. Using their benchmark estimation, a simple back-of-the-envelope calculation suggests that 58 percent of all mass shootings between January 1, 2013 and June 23, 2016 are explainable by news coverage. In terms of timeframes, news coverage seems to systematically raise the number of mass shootings in the following four to ten days and the effect reverts back to statistical insignificance after approximately 12 days.

Conclusion

As what has been dealt with in this chapter, there are many key factors that contribute to the occurrence and prevalence of mass shooting incidents in America. In section one about political and legislative factors, there is a reference to US gun history, the multiple definitions, trends and characteristics of mass shootings as well as federal preemption and state rights regarding firearm regulation. Furthermore, other related factors are discussed such gun ownership and state law permissiveness, polarized attributions, restricted and unfunded research about mass shootings.

In section two, the discussion focuses on mental health issue, personal grudges and grievances such as multiple motivations of the murders, copycat crimes, and contagion. Additionally, there is a reference to other related factors like income inequality, gun culture and lax gun regulation, domestic violence, media coverage and subsequent shootings.

Having a comprehensive understanding of the factors underling the phenomenon of mass shootings could be useful in determining the right policy to address the issue as well as determine the appropriate ways prevent its upcoming occurrence.

The following chapters will explore the consequences of mass shootings in America and analyze the potential avenues to address in addition to mitigate the occurrence of this tragic phenomenon.

CHAPTER TWO

Consequences of Mass Shootings in America

Chapter Two: Consequences of Mass Shootings in America

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Introduction

More than 2,300 individuals have been the victims of mass shooting incidents which involve a firearm in the United States, over the past decades (Soni & Tekin, 2020). Although there is no specific definition to mass shootings, they involve killing four or more people indiscriminately with a firearm in a public place. These tragic and increasing incidents lead to many fatalities, casualties and leave physical as well as psychological adverse effects on American individuals and communities.

In this chapter, different consequences of mass shootings in America are explored. In section one, concerning individual and community consequences, effects are discussed like psychological and mental health outcomes, community well-beings and emotional health, school shootings in addition to nation's youth. In section two, about political and gun policy impact of mass shootings, related topics are referred to, for example proximity and public support for gun control, effects of mass shootings on gun policy, polarized responses on gun control. While in section three concerning economic and business impact of mass shootings, connected issues are discussed like economic costs, job-related and professional impact, consumers' safety and retail Businesses.

Having a broader understanding about the consequences of mass shootings in America, could potentially urge researchers, law enforcement agencies and policy makers to identify appropriate ways to address the issue.

2.1. Individual and Community Consequences

2.1.1 Psychological and Mental Health Outcomes

Lowe and Galea (2015) estimate that, despite the potentially widespread and increasing mental health impact of mass shootings, no efforts to their knowledge have been done to review the empirical literature on this topic. 49 peer-reviewed articles, contained of 27 independent

samples in the aftermath of 15 mass shooting incidents were identified. Lowe and Galea' review that mass shootings are associated with a variety of adverse psychological outcomes in survivors and members of affected communities. Less is known about the psychological outcomes of mass shootings on indirectly exposed populations; however, there is evidence that such events result at least short-term increases in fears and declines in perceived safety.

Lowe and Galea (2015) conduct a review of empirical researches on the mental health consequences of mass shootings. Their purpose of the review has been to analysis the existing literature on mental health after each mass shooting. The research to date lay down evidence that these events could have mental health consequences for victims and members of affected population, leading to increases in post-traumatic stress syndrome (PTSS), depression, and other psychological symptoms. The few studies on remote samples further suggest that these events may have at least short-term psychological effects for example increased fears and decline in perceived safety on persons living far outside of the affected communities. These effects are not spread in an equal way, however, and research has detected several risk factors for adverse outcomes, including demographic characteristics (e.g., female gender and lower socioeconomic status), higher pre-event trauma exposure and psychological symptoms, greater direct and indirect event exposure, and lack of psychosocial resources (e.g., emotional regulation difficulties, experiential avoidance, and low social support). Although the existing body of research provides some conclusions about the mental health effects of mass shootings, more research is required to better understand the mechanisms through which risk and protective factors contribute to longer term outcomes.

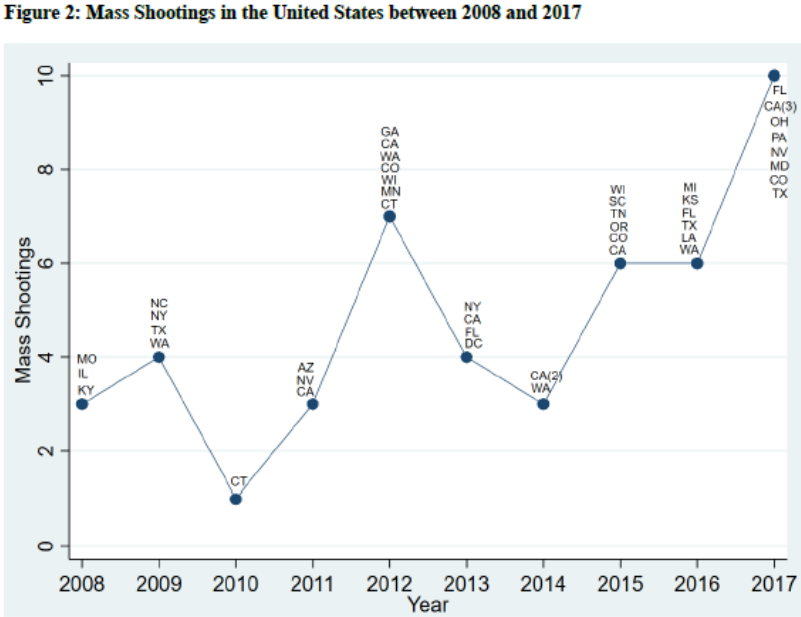
2.1.2 Community Wellbeing and Emotional Health

Soni and Tekin (2020) argue that there is especially little research on whether mass shootings have an effect on the mental health of indirectly exposed individuals. For instance, those who are not direct witnesses but live within the communities where these shootings happen.

They state that their study offers evidence on the dangerous spillover effects of mass shootings on community comfort. Their analysis of individuals living in 47 counties that experienced mass shootings from 2008 through 2017 shows that a mass shooting minimizes the probability of appreciating excellent community wellbeing by 27 percentage points and decreases the likelihood of having excellent emotional health by 13 percentage points four weeks after the incident occurs. These effects are larger and they endure longer for more intense shootings.

Figure 2 shows the number of mass shootings over time along with a list of states where the incidents occur in each year. It is clear from the figure that the number of mass shootings has trended upward over time, increasing from 03 mass shootings in 2008 to 11 incidents in 2017.

Figure 2.1: Mass Shootings in the United States (2008-2017)



Source: The Mother Jones database of mass shootings. Figure displays the number of mass shootings each year and the states in which these shootings occurred.

Note. From *How Do Mass Shootings Affect Community Wellbeing?* by Soni and Tekin (2020) (<https://jhr.uwpress.org/content/early/2023/06/01/jhr.1220-11385R1>)

Soni and Tekin (2020), also, notice that mass shootings reduce the emotional wellbeing of adults in the society. Several researches have proven strong connections between emotional distress and health (Stewart-Brown, 1998). For example, a study has shown that stress could provoke depression and hypertension (Van Praag, 2004; Sparrenberger et al., 2009). By limiting

emotional wellbeing, mass shooting events thus have harmful consequences for overall health of people in the community. As an example, some people may resort to smoking habits as a means to survive with the emotional stress in the aftermath of public firearm attacks (Cameron & Jones, 1985; Choi et al., 2015). Indeed, an examination for the smoking behavior using the Gallup data shows that living in a county with a mass shooting in the past 28 days is connected to a 4.2 percentage points ($p < 0.10$) or 28 percent has increased the probability of current smoking. Moreover, the possibility of smoking increases during four weeks in the aftermath of a shooting. They also found that increased smoking in the weeks after a mass shooting may reflect a behavioral reaction to the stress and anxiety which come from the shootings.

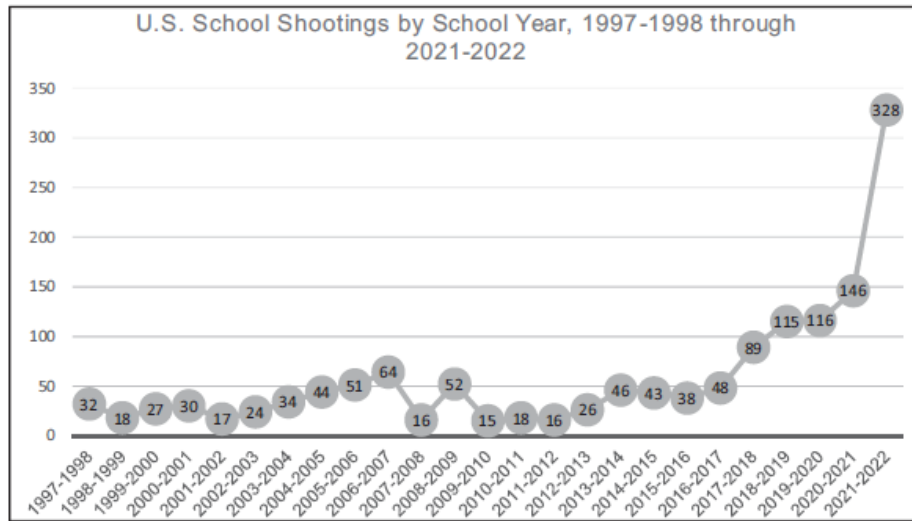
2.1.3 School Shootings and Nation's Youth

Rapa et al. (2023) believe that gun violence in the United States is a public health problem with intensive consequences for youth and adolescents. In 2019, gun injury became the key factor of death among children aged birth to 19 years exceeding deaths related to road accidents for the first time. In 2020, the United States was the only country among its higher-income counterparts in which firearms were the main reason for death among children and youth.

In the 2021–2022 school academic years, the approximate number of gunfire attacks on school grounds had virtually multiplied by four over the previous year, reaching an all-time high. Likewise, during that same year, there were a total of 93 school shootings with victims in elementary as well as secondary schools— more than in any other year since the Centers for Disease Control and Prevention started collecting such information. In all, the United States has had 57 times as many school gunfire assaults as all other chief industrialized countries combined.

Figure 1: The number of school shootings in the United States within a given school term has increased significantly over the last 25 years, with the number of incidents per year initially seeming to be somewhat stable, then going down slightly, but then rising rapidly in more recent years.

Figure 2.2: U.S. School Shootings by School Year, 1997-2022



Note. From *School Shootings in the United States: 1997–2022*, Rapa et al. (2023) (<http://publications.aap.org/pediatrics/article-pdf/153/4/e2023064311/1615220/peds.2023-064311.pdf>)

Children experiencing gun violence in the United States, including gun attack connected with school shootings, has become ordinary over the last quarter century. The Columbine High School tragedy that happened in April 1999 intensifies American discourse—and remains symbolically leading the American mentality—about school-related gun violence. Since that time, gun violence has come to characterize schooling experiences of the youth of the country. As such, the issue of gun violence in the United States, encompassing gun violence connected to school, calls for continued attention, especially regarding its effects on youth.

Consequently, Rapa et al. (2023) conducted this study to assess gun violence related to school over the latest past 25-year period, beginning roughly with the Columbine High School tragedy. They start to analyze gun violence connected to school regarding kindergarten through grade 12 school shootings and school mass shootings throughout 25-year period left, 1997–1998 through 2021–2022. The primary goal, in this context, was to comprehend the frequency of school related gun violence across the quarter century, from the 1997–1998 school years through

the 2021–2022 school year, taking into account both school shootings and school mass shootings.

Rapa et al. (2023) drew on 2 publicly accessible datasets whose data would permit them to compile the frequent occurrence of school shootings and school mass shootings from the 1997–1998 school years through the 2021–2022 school year. Data on school mass shootings which was obtained from the US Mass Shootings, 1982–2023 database, are developed by Mother Jones.

The pervasiveness of school shootings and school mass shootings provokes trauma in school-aged adolescents. To cope with the aftermath of violence related school shootings and school mass shootings is stressful and heightens that distress. Children and adolescents directly experiencing violence and crime confront a variety of other difficulties involving, posttraumatic stress disorder, school failure, drug and alcohol use and abuse, depression, anxiety, and involvement in delinquent activity. Besides, youth indirectly exposed are peripherally affected through pervasive media coverage of school shootings as well as school mass shootings. This case provokes more people to suffer from the effects of these tragedies which lead to outcomes connected to deteriorated mental health consequences among members of communities in which gun violence takes place.

Traumatic events, which occur in proximity or distance, provoke youth's development and welfare. Yet, schools often lack the financing for resources, student support programs, and personnel to provide students with optimal care. That is, schools sometimes struggle to meet the demands of students' mental health needs even as the prevalence of school shootings increases and as the consequences of school mass shootings become more dire. Successful school-based interventions and responses are possible, and they may lessen the probability of further trauma among youth impacted by gun violence.

2.2 Political and Legal Impact of Mass Shootings

2.2.1 Proximity and Public Support for Gun Control

Newman and Hartman (2017) argue that residing near a mass shooting should increase support for gun control by making the threat of gun violence more salient.

On December 14, 2012, a young man opened fire on 28 people at Sandy Hook Elementary in Newtown, Connecticut, killing 20 school children and 6 adult staff members in one of the worst mass public shootings in recent U.S. history. In the weeks that followed, a strong public discussion revolved the matter of gun violence, covering a broad range of topics for example the mental health of offenders, cultural matters, and aggressive video games, with the core political issue being restricting access to firearms. Speaking about the tragedy, former President Obama reminded Americans that Newtown was not an isolated incident; rather, there seemed to be “an endless series of deadly shootings across the country, almost daily reports of victims, many of them children, in small towns and big cities all over America.”

Gun legislation has become a permanent issue in U.S. politics, motivated largely by the increased media attention and public interest in gun control laws following mass public shootings. A predictable feature of the discourse following mass shootings in the U.S. is the polarized response by gun rights and gun control activists.

On the one hand, powerful gun rights advocates like the National Rifle Association claim that these attacks demonstrate the need for more—not less—access to firearms in the hands of qualified professionals. On the heels of the Sandy Hook shootings, NRA Executive Vice President Wayne La Pierre famously said, “the only thing that stops a bad guy with a gun is a good guy with a gun.” Second Amendment supporters also refer to rushes in NRA membership in the aftermath of mass public shootings as evidence of the public’s support for their cause.

On the other hand, popular gun control groups like the Brady Campaign to Prevent Gun Violence urge lawmakers to heed the millions of dollars in private donations that poured in after Sandy Hook and similar events as a signal that public opinion had shifted in their favor. Dan

Gross, President of the Brady Campaign, pleaded with Congress to acknowledge the growing “disconnect between what the American public wants on this issue and what [our] elected officials are doing about it.”

When changing focus from the responses of elites to the general public, one question of whether public opinion is impacted by instances of profound gun violence raises to the surface. Further, compared to citizens living hundreds or even thousands of miles away from a shooting and learning about it through the mass media, there is a relatively large and growing body of Americans who have had their lives personally touched by gun violence by having a mass shooting occur in or near their community of residence. One question yet to be empirically addressed is, for these citizens, does having a mass shooting occur so close to home trigger support for increased government efforts toward gun control?

Using data from multiple sources on mass public shootings merged with the 2010 Cooperative Congressional Election Study (CCES), Newman and Hartman show that increased proximity to a mass shooting is associated with heightened public support for stricter government regulation of firearms.

Importantly, they show that this main effect does not vary by partisanship. To demonstrate the robustness of Newman and Hartman (2017)'s main finding, they show that this contextual effect is conditional upon additional salience-related factors, like (1) repeated events, (2) the magnitude of the event (i.e., the number of victims), and (3) the recency of events.

To offer a stronger test of causal effects, Newman and Hartman use the 2010-2012 CCES re-interview panel to demonstrate that respondents “treated” with a mass public shooting occurring near their residence between survey waves were significantly more likely than “untreated” respondents to shift their opinions toward support for stricter gun control policies. Last, they show that their results using the 2010 CCES replicate using separate survey data collected in 2010 by the Pew Research Center.

The results from Newman and Hartman's analysis results align with expectations, as an increase in proximity to a mass public shooting is associated with a significant increase in support for stricter gun control laws.

Newman and Hartman (2017) considered that their findings suggest that Americans either Democrats or Republicans are responsive to tragic incidents like mass public shootings, even in a contextually dependent way. In contrast to claims made by vocal gun rights' advocates, they uncovered evidence that citizens living near mass public shootings are more likely to prefer gun control.

2.2.2 Effect of Mass shootings on Gun Policy

Luca et al. (2019) estimated that while most homicides receive little attention from the public, mass shooting incidents are extremely salient. However, there is a common as well as frequently articulated view is that despite extensive discussion about mass shootings, they have little influence on policymaking.

Political scientists have noted that issues tend to rise and fall in importance within a policy agenda, creating periods in which specific policies shift very rapidly and other periods in which they do not change at all (Baumgartner & Jones 1993, Kingdon 1984). In the context of gun violence, events like the Columbine High School shooting in Colorado have led to calls for new restrictions on guns as well as intense responses from groups that oppose such changes and favor the loosening of gun laws (Goss 2006; Spitzer 2012). More generally, mass shootings may create “policy windows” during which legislatures become receptive to change—potentially due to shifts in the attention of the media and constituents. However, the extent to which mass shootings affect policy and the nature of the resulting changes are empirical questions.

Luca et al. (2019) claim that they explore the impact of mass shootings on gun policy, constructing a dataset of all U.S. gun legislation and mass shootings over a period of twenty-five years (1989–2014) — combining data from a variety of media and government sources. They begin by looking at the extent of deaths resulting from mass shootings relative to other gun

deaths. Overall, there are more than 30,000 gun-related fatalities in the United States per year. Approximately 56% of these are suicides and 40% are homicides. The remaining 4% are accidents or incidents of undetermined intent. Mass shootings accounted for about 0.13% of all gun deaths and 0.34% of gun murders between 1989 and 2014.

Because mass shootings are notable and potentially random occurrences, Luca et al. (2019) state that they are able to apply a difference-in-differences strategy around the timing of mass shootings to estimate their causal impact on gun regulation. They compare gun laws before as well as after mass shootings, in states where mass shootings occur relative to all other states.

They then present three main findings about the impact of mass shootings on policy. First, mass shootings evoke large policy responses. A single mass shooting results an approximately 15% increase in the number of firearm bills introduced within a state in the year after a mass shooting. This effect is largest after shootings with the most fatalities and is greatest in the Republican-controlled legislatures.

Second, although mass shootings account for a small section of all gun deaths, they have a significant impact related to other homicides. Luca et al. (2019)'s approximations suggest that the per-death impact of mass shootings on bills introduced is much larger than the impact of gun homicides in non-mass shooting incidents.

Third, when looking at enacted laws, the impact of mass shootings depends on the party in power. A mass shooting roughly doubles the number of laws enacted in a year that loosen gun restrictions in states with Republican-controlled legislatures. These researchers found no significant effect of mass shootings on laws enacted when there is a Democrat-controlled legislature. They also found no significant effect of mass shootings on the number of enacted laws that tighten gun restrictions.

Luca et al. (2019) reach a conclusion that even random and infrequent events that account for a relatively small portion of total societal harm might nonetheless be crucial levers for policy consideration and change. This does not imply that politicians and policy makers are over-

reacting; it may be that on issues where there is usually political deadlock, salient events create opportunities for change that has been sought all along.

2.2.3 Polarized Responses on Gun Policy

Reny et al. (2023) estimate that public mass shootings consistently bother the United States thus an increasing number of studies seeks to understand the political effects of these tragic events. The existing literature, however, focuses on public opinion or turnout and vote choice, leaving open to question whether or not public mass shootings affect a range of other important actions citizens may take to engage with gun policy.

A common explanation offered by pundits and journalists for the lack of drastic policy change toward greater gun control in response to public mass shootings is that these events, while horrendous, do not drive the American public into action aimed at curbing gun violence. For example, a recent editorial in the Washington Post asserted, “rarely do Americans who support gun control make it their top priority”. Some claim that the persistence of mass shootings has acclimated the American people to gun violence to such an extent that “mass shootings have become white noise”, with the result being “Americans get apathetic about gun control”. Indeed, journalists have suggested that the recurrence of chaotic events like mass shootings may lead to “crisis fatigue,” which causes society to “collectively throw up our hands and give up on civic engagement”. Adding to this, many experts claim there exists an “enthusiasm gap” about gun policy in America, with opponents of gun control holding gun rights as central to their political identity and highly willing to engage in routine political action in support of their views, while public support for gun control ebbs and flows in a fleeting manner around instances of acute gun violence. Topping this off is evidence that many public mass shootings fail to trigger national media attention, while the ones that do often succumb to the “issue-attention cycle”, whereby spikes in coverage precipitously decline a few weeks after a shooting and the focus of the media—and thus the general public—shifts from gun control to other issues.

By leveraging the as-good-as random timing of high-publicity public mass shootings over the past decade and an immense array of publicly available and proprietary data, Reny et al. (2023) demonstrate that these events consistently cause surges in public engagement with gun policy—including internet searches, streaming documentaries, discussion on social media, signing petitions, and donating to political action committees. Importantly, the behaviors where shootings induce polarizing upswings in engagement and those where upswings skew toward gun control are documented.

Reny et al. (2023)'s findings demonstrate that high-publicity public mass shootings cause drastic increases in internet searches for gun control and gun control advocacy organizations, online political speech mentioning gun control and gun control advocacy organizations, signing petitions demanding gun control, and donations to the PACs of gun control organizations. These spikes in political activity are typically quite large, constituting a multiple SD shift from pre-shooting patterns for many of these outcomes.

Interestingly, high-publicity public mass shootings typically prompt countervailing spikes in information-seeking about and online discussion of gun rights and pro-gun political organizations. That said, when analyzing sales on Amazon.com of popular political flags with gun rights slogans, Reny et al. (2023) failed to observe any effect of public mass shootings on purchases. Adding to this, when focus was turned to efforts by Americans to directly influence lawmakers and policy advocacy organizations—namely, petition signing and PAC donations—these researchers found that high-publicity public mass shootings only trigger activity oriented toward gun control. Finally, they found that low-publicity public mass shootings typically fail to instigate significant changes in Americans' level of engagement with gun policy.

2.3 Economic and Business Impact of Mass Shootings

2.3.1 Economic Costs

Brodeur and Yousaf (2019) estimate that, from 2000 to 2015, there have been approximately 175 mass shootings in the U.S. leading to more than 900 fatalities and thousands of injured people. Therefore, there is a need to make progress towards an empirical examination of the economic determinants and consequences of mass shootings.

The two researchers declare that they first investigated whether unemployment and financial distress might trigger mass shooting. Specifically, they attempted to track down the socioeconomic backgrounds of individuals involved in mass shootings over the period 2000 - 2015. To be considered a mass shooting, the shooting incident needs to lead to four or more people killed. Both researchers compiled the list of mass shootings using three main data sources. They then relied on automated and manual data collection strategies to collect the following socioeconomic characteristics of perpetrators at the time of the shooting: age, education, employment status, history of mental illness, marital status, nationality, place of residence and race. They also collected information on risk factors (e.g., financial distress or social rejection). They compared these individuals to American men aged 20-50.

Brodeur and Yousaf (2019) found that approximately 40% of shooters were in financial distress and that 45% were unemployed or out of the labor force at the moment of the shooting, suggesting that economic distress may trigger rise in mass shootings. These figures decrease to 18% and 25% for school-related shootings, respectively. In contrast, about 70% of perpetrators were in financial distress for workplace-related shootings. Their findings are consistent with anecdotal evidence that many perpetrators who target workplaces were fired (or about to be fired) in the days prior to the shooting.

They found that successful mass shootings in comparison to failed mass shootings reduce the number of jobs and establishments in targeted counties by about 1.8% and 1.3%, respectively. Similarly, they found that successful mass shootings significantly decrease total earnings and earnings per job. The estimated effects persist for several years after the shooting. In contrast, they did not find any evidence that failed mass shootings significantly affect local economies. These findings are consistent with the fact that successful and failed mass shootings differ in two key dimensions. First, successful shootings lead to significantly more casualties than failed shootings. Second, they show that successful shootings receive significantly more national media coverage than failed shootings. In other words, successful shootings are more salient than failed shootings, which may explain the lack of meaningful economic loss for counties hit by a failed shooting.

Brodeur and Yousaf (2019) then turn to understanding the channels through which successful mass shootings might affect local economies. They found that the economic consequences of successful mass shootings are larger for manufacturing and goods-producing firms and smaller for the service industries. Of note, though, they found a significant reduction of employment in the leisure as well as hospitality industry, suggesting a negative effect on the tourism industry.

Further, they found that the effect of a decrease in the number of firms is mainly driven by a reduction in the number of small establishments (less than 100 workers). They also found that housing prices decrease by approximately 3% in the years following a successful mass shooting.

They further explore several mechanisms that may explain the effect of successful mass shootings on local economies. Using the Michigan Survey of Consumers, they analyze the effect of successful mass shootings on consumer sentiment. They found that successful mass shootings lead to a pessimistic view of respondents' own personal financial conditions and local business conditions. Specifically, consumers in counties with successful mass shootings are 5.2% more

likely to say that their personal finances are worse now than before the shooting and 4.9% more likely to say that the local business conditions are worse now than before the shooting. Furthermore, Brodeur and Yousaf state that they rely on self-reported health data from the Behavioral Risk Factor Surveillance System and show that residents of targeted areas are more likely to report being unable to do their usual activities like working because of poor health. These results provide suggestive evidence that successful mass shootings may impact local businesses in addition to jobs by increasing absenteeism and possibly decreasing productivity through poor mental health.

2.3.2 Job-related and Professional Impact

Ellsworth et al. (2022) believe that mass shootings continue to persist in the United States therefore their occupational impact on victims needs further understanding.

They claim that gaps in literature need to be addressed by examining the occupational impact that mass shootings have on victims of varying degrees of association with the event. To address these gaps, the authors conducted research to answer the question: What is the occupational impact of mass shootings on exposed individuals in the United States? Unobtrusive methods were used to collect and analyze publicly accessible audiovisual and written records following a qualitative research design. Themes were developed through thematic analysis.

Those who are exposed to mass shootings are impacted in many ways. While many survivors of mass shootings show resilience, some experience chronic mental health concerns (Novotney, 2018). Mental health concerns may include post-traumatic stress disorder (PTSD), anxiety, depression, or substance abuse (Novotney, 2018). These conditions may lead to social, occupational, or other functional impairments that reduce victims' daily functioning and occupational performance (Torchalla et al., 2018).

From a psychosocial perspective, those impacted by mass shootings may no longer feel safe in their communities (Mazzei & Edelheit, 2019). Following a traumatic event, individuals may avoid stimuli associated with the event, like people, places, or activities, as noted by a

diminished interest in activities they previously enjoyed or detachment from others (CSAT, 2014). The impacts of mass shootings extend to populations further removed from the immediate event, as exemplified in a study that found one-third of adults in the United States refrained from going to certain places or events because of fear of a mass shooting (Bethune & Lewan, 2019).

Ellsworth et al. (2022) found that victims of mass shootings in the United States experience changes in occupational performance, participation, and fulfillment of meaningful performance patterns, including roles, routines, habits, and rituals. Increasing therapists' awareness of the occupation-based changes that victims of mass shootings may experience could ensure their receipt of appropriate care.

2.3.3 Consumer Safety and Retail Businesses

Chiong et al. (2024) believe that mass shootings in the U.S. have become alarmingly frequent, with an increasing number targeting retail locations with high foot traffic, like shopping malls.

On May 6, 2023, a gunman wearing tactical gear opened fire into a crowd of shoppers on a busy Saturday afternoon at Allen Outlet Mall, located approximately 25 miles north of Dallas, Texas. Nine people were killed, and another seven were critically injured. Mass shootings like this are occurring more frequently at shopping malls and retail establishments, and while the human cost is clear, little is known about how they impact businesses as well as consumer shopping patterns.

Chiong et al. (2024) state that they contribute to this nascent understanding by investigating retail mass shootings – those occurring in locations such as shopping malls, supermarkets, restaurants, and other retail outlets and shops. They assume that no study has specifically investigated retail mass shootings and their economic impact.

To study the current issue, Chiong et al. combined U.S. mass shooting incident data with store-level credit and debit card transaction data that are matched to the location of the incident. Because mass shootings are salient and plausibly random events, they implemented a difference

in- differences (DID) strategy around the timing and location of mass shootings to estimate their causal impact on consumer shopping behavior. Specifically, they compared the performance of stores that encountered a mass shooting (i.e., treatment group) to that of stores that did not (i.e., control group). Chiong et al. (2024) add that they examined 138 recent retail mass shootings that occurred in an 18-month period between January 2022 and June 2023 and their impact on retail performance by tracking 1,496 individual retail businesses.

However, these studies are based on surveys, and there have been no systematic studies investigating consumer fear based on revealed preferences from actual shopping data. The highly politicized nature of mass shootings means that consumers' stated preferences might not align with their actual shopping patterns. For instance, it is not uncommon for shoppers to appear unfazed by mass shootings, with shopping outlets quickly returning to normal within a day. Additionally, other research also suggests societal desensitization to repeated acts of violence (Goldstein & Prater 2023, Li et al. 2017). Given the unpredictable nature of mass shootings, it is unclear whether consumers should avoid a location that has been targeted before, especially if the chance of another incident happening there is the same as at any other place. All these factors point to a nuanced effect of mass shootings on consumers.

First, Chiong et al. (2024) found evidence supporting the idea that fear and safety concerns lead consumers to avoid visiting or spending time at physical retail locations. Second, they found evidence that desensitization and normalization to gun violence play a role in consumer response to mass shootings. In particular, they show that the local baseline firearm mortality rate moderates the impact of mass shootings. According to Chiong et al. (2024), their findings imply that the degree of consumer desensitization, measured by the level of local gun violence mortality, mitigates the adverse impacts of mass shootings on retail outcomes. Conversely, mass shooting incidents may cause greater disruptions for businesses in areas with relatively low rates of gun-related deaths.

Third, these researchers state that they explored how gun regulations and legislative measures may influence consumer response to mass shootings. They found that consumers react less intensely to mass shootings in states with stronger gun control policies. This suggests that consumers may fear less for their safety after mass shootings because they perceive such incidents to be less likely to recur due to the strength of gun control laws. Moreover, they found further evidence that consumers form expectations about lawmakers' response: when lawmakers actively pass stronger gun control laws, the impact of a mass shooting is lessened as consumers expect lawmakers to respond to the incident by enacting more gun safety regulations, further reducing the perceived risk of subsequent mass shootings.

Conclusion

The consequences of mass shootings are not limited to death and injury. Being exposed, directly or indirectly, to firearm attacks this leads to psychological and mental outcomes and impact the wellbeing of individuals and communities in America. Besides, mass shootings may rise public responses and urge policy makers to take action. Meanwhile, these tragic events may deepen polarization and division in public opinion regarding attribution and prevention. Additionally, mass public incidents have multiple economic costs and negative impact on businesses, consumers, and occupations.

A comprehensive understanding of the consequences of mass shootings in America may motivate further research in order to bridge the gaps and address the issue.

CHAPTER THREE

Prevention, Policy and Mitigation of Mass Shootings in America

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Introduction

Mass public shootings that involve killing people indiscriminately in public places are tragic incidents that continue to claim the lives of many of Americans. These events are continuously growing in fatality and incidence, and lead to multiple negative consequences. Their effects are not limited to death and injury but they extend to physical, psychological impact and threaten the wellbeing on American individuals and communities as well as other political and economic negative outcomes.

In this chapter, the different public policies and preventive strategies are analyzed aiming to address the phenomenon of mass shootings in America. In section one, about the legal and public policies to address Mass shootings, background checks, extreme risk protection orders (red flag) and large capacity magazine bans are discussed. In section two, about prevention strategies for mass shootings, leakage plan and threat assessment, health and mental health service providing, school safety measures are examined. Policy recommendations and general discussion are referred to as well.

Analyzing public policies and preventive strategies that aim to address the phenomenon of mass shootings in America may enable researchers, public opinion and policy makers to assess the effectiveness and reliability of the current measures, identify weaknesses and strength, and propose appropriate ways as well as alternatives solutions.

3.1 Legal and Public Policies

3.1.1 Background Checks

Zeoli et al. (2023) estimate background checks are a key piece of evidence-based gun policy. State and federal legislators may try to keep guns away from those at high risk of harming themselves or others. This could be done by crafting a list of conditions that disqualify a

person from purchasing or possessing a gun, at least temporarily. Background checks allow government officials to screen for high-risk individuals seeking to acquire guns.

Federal law establishes a framework for background checks but leaves many transfers unregulated. Under federal law, individuals seeking to purchase a firearm from a federal firearms licensee (FFL) must pass a background check (18 U.S.C. § 922). Anyone engaged in the “business of importing, manufacturing, or dealing in firearms” must be licensed as an FFL (18 U.S.C. § 923).

When a prospective purchaser seeks to buy a gun from an FFL, the buyer will complete a standard form, and the seller will then contact the National Instant Criminal Background Check System (NICS) (ATF [Bureau of Alcohol, Tobacco, Firearms and Explosives] 2022). In most cases, NICS will be able to determine the buyer’s eligibility immediately. In some cases, the FBI may need more time to determine whether a buyer is prohibited from purchasing a gun. In these instances, the FBI has three days to investigate. If, after three days, the seller has not heard from the FBI, the sale can proceed (FBI, 2022).

Federal law has left at least two significant gaps for states to fill. First, NICS is only as effective as the records it can examine. The system relies upon voluntary reports from law enforcement agencies, which means comprehensive crime data are not always available for NICS checks.

Most states rely on the FBI when managing background checks, but nineteen states have designated a state agency to run background checks. These agencies may have access to more complete records than federal checks (FBI, 2021b). When record quality is poor, background checks may not prevent a person with a prohibiting condition from acquiring a firearm. Even if the records are perfect, high-risk individual transfers could only be prohibited if a background check is performed.

The studies suggest that state background check laws have been implemented poorly. The implementation challenges include poor record-keeping and reporting, superficial background

checks, and noncompliance among buyers and sellers (Wintemute, 2019). These shortcomings can be rectified through improved enforcement and implementation of current policies or through adoption of new policies that better identify as well as screen out prospective purchasers at high risk of harming themselves or others.

3.1.2 Extreme Risk Protection Orders (Red Flag)

Zeoli et al. (2023) argue that several states have passed Extreme Risk Protection Orders (red flag) laws to give law enforcement and other authorized individuals a tool to prevent dangerous individuals from firearm access. The enactment of these laws increased dramatically after 2017 and plateaued in 2020. In June 2022, the federal government enacted new firearm safety legislation called Bipartisan Safer Communities Act that included funding for states that enact crisis intervention measures, such as ERPO laws.

In states that have ERPO laws, law enforcement officers are authorized to petition the court in their jurisdiction, generally a county, for an ERPO against high-risk individuals. Some states additionally allow other groups to petition, including family or household members, intimate partners, employers or coworkers, healthcare professionals, or school personnel. When someone is at great risk of harming themselves or others, an authorized petitioner can submit a petition to the court that demonstrates that risk. The judge then decides whether the evidence warrants temporarily restricting the person the ERPO is against (termed “respondent”) from accessing firearms.

Application of ERPOs has been challenging in many states. The use of ERPOs has been difficult for law enforcement because of the staffing and time commitment burdens to submit a petition, testify in court, serve the order, and remove firearms (Pear et al. 2021; Swanson et al. 2017). It may also be difficult to find and serve respondents, which is necessary for an ERPO to take effect (Pallin et al. 2020).

In the light of this situation, the number of ERPOs issued has been low, especially in certain counties (Barnard et al. 2021). Despite the fact that ERPO knowledge is limited and there

is substantial county-level variation in ERPO counts, multiple counties and states report that ERPO use has increased over time (Frattaroli et al. 2020; Pallin et al. 2020). Research on whether ERPOs have decreased the risk of firearm injury is in its infancy as most states adopted their ERPO laws since 2016. Limited evidence at the individual level suggests that ERPOs may decrease firearm injury.

3.1.3 Large Capacity Magazine Bans

Klarevas et al. (2019) believe that there is some evidence that laws imposing tighter restrictions on access to firearms have been associated with lower levels of mass shootings. One suggestion that has received renewed interest involves restricting the ownership of large-capacity magazines (LCMs). This raises an important question about whether there has been an impact of LCM bans on high-fatality mass shootings.

In an attempt to halt an increase in mass shooting violence in the early 1990s, Congress in 1994 enacted the federal assault weapons ban (FAWB), which restricted ownership of certain ammunition-feeding devices. The law, which contained a sunset provision, was allowed to expire a decade later.

Beginning with New Jersey in 1990, some states implemented their own regulations on LCMs. Today, 9 states and the District of Columbia restrict the possession of LCMs. The bans vary along many dimensions, including maximum bullet capacity of permissible magazines, grandfathering of existing LCMs, and applicable firearms.

Klarevas et al. (2019) argue that high-fatality mass shootings are not common, even in the United States. Between 1990 and 2017, there has been an average of 2.5 incidents per year, with an average of 25 people killed annually in such attacks. However, the number of incidents and the number of people killed per incident have been increasing since the end of the federal assault weapons ban.

In their study, these researchers found that bans on LCMs were associated with both lower incidence of high-fatality mass shootings and lower fatality tolls per incident. The difference in

incidence and overall number of fatalities between states, with and without bans, was even greater for LCM-involved high-fatality mass shootings. The rate of high-fatality mass shootings increased considerably after September 2004 when the federal assault weapons ban expired.

In the 10 years the federal ban was in effect, there were 12 high-fatality mass shootings and 89 deaths (an average of 1.2 incidents and 8.9 deaths per year). Since then, through 2017, there have been 48 high-fatality mass shootings and 527 deaths (an average of 3.6 incidents and 39.6 deaths per year in these 13.3 years). Of the 69 high-fatality mass shootings from 1990 to 2017, 49 occurred in states without an LCM ban in effect at the time and 20 in states with a ban in effect at the time. The annual incidence rate for high-fatality mass shootings in states without an LCM ban was 11.7 per billion population; the annual incidence rate for high-fatality mass shootings in states with an LCM ban was 5.1 per billion population. In that 28-year period, the rate of high-fatality mass shootings per capita was 2.3 times higher in states without an LCM ban.

3.2 Prevention Strategies of Mass Shootings

3.2.1 Leakage Plan and Threat Assessment

Peterson et al. (2021) argue that one encouraging way for mass shooting prevention is threat assessment, which was born out of work by the US Secret Service after several high-profile attacks on public officials and figures.

Threat assessment is designed to evaluate whether someone may engage in targeted violence rather than other forms of violence and consistent with a public health approach to violence reduction is a deductive process focused on what a person's behavior and communications (not characteristics) signal about their potential to do harm. A key concept in threat assessment is leakage which is defined as communication to a third party of intent to do harm to a target. Leakage is one of several types of warning behaviors that, when recognized as well as responded to, could prevent a mass shooting before it occurs.

Understanding the phenomenon of leakage is critical for designing intervention strategies to prevent mass shootings. Few studies to date have examined leakage in the context of mass shootings. One study of the 15 deadliest shootings from 1998 to 2018 found that 87% of perpetrators leaked violent thoughts or intent and 80% leaked their interest in mass killing specifically. Another study of 30 adult mass murderers found some form of leakage in 67% of cases.

Silver et al. (2018) theorized that the motivation for perpetrator leakage may be attention seeking, intimidation, or excitement. Consistent with this theory, there is some evidence that perpetrators of mass shootings are narcissistic and committing a public mass shooting fulfills their quest for celebrity status. Media coverage of mass shootings is intense and some mass shootings are a form of public performance meant to draw attention to one's grievance as well as anger with the world.

On the other hand, perpetrators of mass shootings are often actively suicidal prior to their attack and many take their own lives—or provoke law enforcement to do so known as suicide by cop—during the attack. Warning signs often are different when an attacker has suicidal motives vs a desire for attention or fame. Publicly leaking plans may function as a cry for help when perpetrators become increasingly suicidal and hopeless.

Peterson et al. examine leakage in a sample of 170 perpetrators of mass shootings from 1966 to 2019 including the prevalence of leakage and characteristics of perpetrators who did and did not leak their plans. Three logistic regression models are used to explore leakage: (1) a baseline model of leakage; (2) the cry-for-help model, which examines the association between leakage and mental health factors; and (3) the fame-seeking model, which examines the association between leakage and fame-seeking factors. Each model serves as a different hypothesis for leakage among mass shooters with unique and important public health implications for mass violence prevention.

Consistent with previous studies of leakage among mass shooters, Peterson et al. (2021) found that leakage was common among public mass shooters overall and particularly among school shooters and young shooters. However, this study asked the critical question of whether leakage was better described as a cry for help or fame-seeking behavior. The results show that leakage was most associated with the cry-for-help model, particularly for youth and those with serious mental health concerns. There was an association between leakage and suicidality and leakage and prior counseling, but at the same time, leakage was uncommon for perpetrators motivated by psychosis.

Peterson et al. (2021) conclude that if perpetrators who leak tend to be young and experience suicidal ideation, punitive measures could exacerbate their grievance and suicidality. Thus, crisis response teams that respond to leakage with appropriate and holistic interventions for example suicide prevention services, mental health services, or peer support, may more effectively prevent future violence.

3.2.2 Health and Mental Health Service Providing

Williamson et al. (2014) argue that Firearm-related homicides, suicides, and unintentional injuries continue to undermine the wellbeing and safety of children and adolescents. Among children and adolescents ages 10 to 19 years homicide and suicide remain the second and third leading causes of death respectively with 1,982 homicides and 1,926 suicides for this age group in 2010 (Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2013). For children between ages 1 and 9 years homicide was the fourth leading cause of death in 2010 impacting 514 children (Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2013). In 2010, 83.8% of homicide victims between the ages of 10 and 19 years were killed with a firearm and 38.8% of youth in this age group used a firearm to commit suicide (Centers for Disease Control and Prevention, National Center for Injury Prevention and Control, 2013).

The prevention of homicide-and suicide related gun violence among youth is a salient concern in home, school, and community settings. Keeping guns in one's home is not a direct cause of firearm-related deaths but failure to lock or otherwise safely store guns and ammunition in the home is a known risk for youth suicide and unintentional firearm injuries and deaths (Barkin et al., 2008; Grossman et al., 2005; Okoro et al., 2005).

The 2011 National Youth Risk Behavior Surveillance System survey found that 5.1% of high school students in Grades 9 through 12 reported carrying a gun at least once in the 30 days prior to the survey (Eaton et al., 2012). This same survey showed that in the 12 months prior to the survey 15.8% of students surveyed had seriously considered attempting suicide 12.8% of students had made a plan to attempt suicide and 7.8% of students had attempted suicide one or more times (Eaton et al., 2012).

In other community settings, particularly high-violence and low-income neighborhood contexts, studies have shown that youth weapon-carrying is associated with decreased perceptions of neighborhood safety, increased exposure to violence, and easy access to guns (e.g., Molnar, Miller, Azrael, & Buka, 2004; Spano, Pridemore, & Bolland, 2012).

Pediatric psychologists and other health and mental health care providers could play an important role in the coordinated prevention of youth gun violence and its effects across multiple settings. Indeed, the American Academy of Pediatrics (AAP, 2012) has taken a supportive position on educating physicians and other health care professionals about the effects of firearm-related violence and has urged pediatricians to counsel parents who own guns about safe storage. Health and mental health care providers are uniquely positioned to prevent gun violence by assessing for risk in youths' homes, schools, and communities.

Williamson et al. (2014) add that communication across health and mental health professionals and pediatric settings and education about gun safety may have an important impact on the wellbeing of children, youth, and families. Health and mental health providers are encouraged to take preventive steps toward the normalization of gun safety discussions and

practices among all families as well as youth who visit pediatric settings, not just among families or youth who appear to be at-risk.

Despite the benefits of these activities for families and youth, health and mental health care professionals have identified many barriers to gun safety counseling in pediatric settings. Although primary care practitioners have indicated that addressing gun safety with families is important, practitioners have reported barriers like a lack of time for and comfort with such activities, low feasibility, implementation of gun safety counseling and other types of in-office violence prevention strategies (Borowsky & Ireland, 1999; Johnson et al., 1999).

3.2.3 School Safety Measures

Pearce and Alleyne (2023) believe that, in the continued absence of direct sustained gun control legislation at the federal level, addressing the enduring problem of gun violence in schools requires a whole approach to school safety and security that ultimately utilizes proven violence prevention practices, leverages federal funding for community-based intervention programs, and centers community voices in decision-making processes. One lever for implementing these promising programs and practices is the Bipartisan Safer Communities Act (BSCA) which was signed into law last year and includes numerous investments in school-based mental health services as well as other community-based initiatives to make schools safer. President Joe Biden recently reaffirmed his administration's commitment to leveraging the BSCA to reduce gun violence in a USA Today op-ed, accompanied by a list of actions the executive branch is taking to maximize the benefits of this legislation.

Pearce and Alleyne suggest 04 key strategies for addressing school gun violence at the community level:

A. Implement critical support and intervention systems and embed social and emotional learning in curricula. School policies and practices that prevent violence and promote early intervention are lifesaving measures for students and school personnel.

Additionally, embedding social and emotional learning practices in academic instruction helps to create a supportive school environment that empowers students to engage in nonviolent problem-solving and to proactively report threats and concerns.

B. Employ restorative discipline practices like mediation conferences, conflict resolution programs, youth courts, community-building circles, in addition to proactive strategies to implement support and intervention systems.

Besides, minimize the presence of law enforcement in schools. The presence of law enforcement officials like school resource officers (SROs) may escalate responses to threats and criminalize lower-level offenses, contributing to the school-to-prison pipeline and actually making some students feel less safe.

C. Create avenues to include community stakeholders' voices and experiences in decision-making. Organizing advisory councils of youth, families, and community members is one way to increase community involvement in decision-making.

D. Utilize community violence intervention programs to identify needs and establish solutions. They involve partnerships between community members, government agencies, and other stakeholders who have established strong credibility and rapport through relationship-building within communities with high rates of gun violence due to systemic disinvestments, trauma, and economic and social well-being stressors.

According to Pearce and Alleyne, schools cannot be disconnected from their community environments, thus, it is a key to address local safety issues and center communities in solutions in order to equitably and sustainably improve school safety. However, while such strategies are crucial for addressing America's gun violence epidemic, communities cannot do this work alone. Government at all levels must institute commonsense gun violence prevention measures—for instance reinstating the assault weapons ban, requiring firearms to be stored securely, and adopting extreme risk protection order policies—to empower families, courts, and law enforcement to temporarily remove firearms from individuals in crisis.

These are all effective ways to prevent as well as reduce gun-related deaths in the nation's public institutions, including schools.

3.2.4 Policy Recommendations

Nagin et al. (2020) describe their policy recommendations as measures for —countering mass shootings in the United States— to reflect the sobering reality that there is no easy solution or quick fix for these horrific events. Although they focus their recommendations on the actions of government (federal, state, or local), nongovernment entities and individuals will also have an important role in preventing mass violence for example, media organizations might limit their reporting on mass violence offenders to discourage copycats seeking fame (Lankford & Silver, 2020) and place managers of potentially vulnerable locations can adopt target hardening and threat mitigation strategies (Freilich, Chermak, & Klein, 2020, this issue).

A. Staunching the Growth of High-capacity Firearms

States with magazine capacity restrictions, however, have fewer mass shootings (Webster, McCourt, Crifasi, & Booty, 2020, this issue). To staunch further growth in the stock of high-capacity semiautomatic weapons, the following are recommended:

- a. For new sales, limit the magazine capacity to 10 rounds. Ownership of existing large capacity magazines should be prohibited or require registration with restrictions on further legal transfer.
- b. Other weapon accessories that increase the discharge rate of semiautomatic weapons (i.e., bump stocks and trigger cranks) should also be prohibited.

B. Curtailing Access to Firearms for Individuals Who Are a Danger to Others or Themselves

- a. Universal background checks should be instated for all firearm purchases including private sales which are not currently covered by federal background check requirements.
- b. Adopt extreme risk protection orders (ERPOs) to disarm high-risk individuals. Mass shooters often present warning signs of their dangerousness or intentions. ERPOs, also

- known as —gun violence restraining orders or —red flag laws, provide a means of temporarily disarming these individuals and preventing them from acquiring new firearms.
- c. Expand and strengthen firearm restrictions for convicted domestic violence offenders and others who are subject to domestic violence restraining orders. More than half of mass shootings involve the death of victims who are intimate partners or family members of the shooter, and approximately one third of mass shooters have a history of domestic violence, often involving contact with the justice system (Zeoli & Paruk, 2020).
 - d. Adopt systems to identify and disarm prohibited gun possessors particularly those at a high risk for violence. Federal and state laws prohibit many categories of dangerous people from possessing firearms but typically lack mechanisms for identifying as well as disarming prohibited persons who are in possession of firearms.
 - e. Install monitoring systems to detect individuals making large and/or frequent purchases of firearms and ammunition, with referrals of such individuals to law enforcement risk assessment teams.

C. Improving Threat Detection Systems

Threats come in two distinct forms. One, which is commonly referred to as leakage, involves a situation in which an individual at an advanced stage of planning attack leaks that intention to others in conversation or on social media (Lankford & Silver, 2020; Silver, 2020, this issue). The other threat type involves more diffuse threats in which intention is ambiguous and planning, if any, is nascent:

- a. Improving the capacity to respond to leakage. In the weeks after the mass shooting events in El Paso, Texas, and Dayton, Ohio, several potential mass shooting events were foiled because individuals close to the would-be perpetrator reported their intentions to law enforcement.

- b.** Improving the capacity to detect leakage. The perpetrators of mass shootings increasingly broadcast their intentions on social media and they do so sufficiently in advance of the planned event that the event itself might be foiled if the communications were detected.
- c.** Responding to nascent threats. Effective response to nascent threats is by nature extremely challenging. There are large numbers of angry, frustrated, and/or mentally ill people who make diffuse threats that they never plan to carry out, let alone act on.

D. Reducing Fatalities at Mass Shooting Events

In recent decades, remarkable strides have been made in both the law enforcement and medical responses to mass shootings that have saved innumerable lives (Reaping, Jacoby, Rajan, & Branas, 2020, this issue). The two key components to reducing fatalities are (1) speedy medical treatment of living victims and (2) preparation of nonmedical personnel in providing treatment.

- a.** Creation of a detailed database documenting police and paramedic response to events of mass violence for the purpose of evaluating the effectiveness of tactics for minimizing harm to victims and responders as well as improving upon the logistics of response.
- b.** Law enforcement and selected school personnel should receive basic training in hemorrhage control. Application of basic procedures in hemorrhage control by nonmedical personnel prior to the arrival of paramedics may have life-saving consequences.
- c.** Trauma center medical personnel, police, and other emergency responders should routinely drill on the response to mass shooting events. Such drills have been shown to be effective in improving response to actual events.
- d.** In circumstances where ambulances for rapid transport of victims to trauma centers are unavailable police patrol cars should be used to transport victims instead with the victim accompanied by someone trained in hemorrhage control. The Philadelphia Police Department has adopted this practice, and evaluations confirm its effectiveness.

E. Formally Tracking Mass Violence

There is currently no official, national data system that tracks mass casualty incidents, defined broadly to include both mass killing and mass injury incidents, or that provides sufficient information on these incidents and actors to support in-depth research and evaluation (Huff-Corzine & Corzine, 2020, this issue; also see Duwe, 2020). Nagin et al. (2020) therefore recommend that the federal government direct and fund the Bureau of Justice Statistics, and/or other appropriate federal agencies, to track mass violence events formally using government in addition to other sources.

As a conclusion, mass violence has arguably become one of the most distressing and defining crime issues of the twenty-first century. The authors in this issue have sought to reinforce the evidence base for understanding, responding to, and preventing these incidents, and their work has pointed the way toward the initial policy recommendations presented here.

3.2.5 General Discussion

In this part, the evidence of each proposed solution is evaluated; their effectiveness in reducing mass shootings and analyses of potential drawbacks of each approach are examined.

a. Background checks

Background checks are gun policy by which state as well as federal legislators are permitted to keep guns away from those at high risk of harming themselves or others (Zeoli et al., 2023). The procedure can be done by crafting a list of conditions that disqualify a person from purchasing or possessing a gun, at least temporarily. This policy allows government officials to screen for high-risk individuals seeking to possess guns.

However, studies inform that state background check laws have been implemented poorly. The implementation challenges include poor record-keeping and reporting, superficial background checks, and noncompliance among buyers and sellers (Wintemute 2019).

Thus, these inadequacies can be repaired through improved enforcement and strict implementation of current policies or through adoption of new policies that better identify as well as screen out prospective purchasers at high risk of harming themselves or others.

b. Extreme Risk Protection Orders (Red Flag)

Several states have passed Extreme Risk Protection Orders (red flag) laws to prevent dangerous individuals from firearm access. When someone is at great risk of harming themselves or others, an authorized petitioner can submit a petition to the court that demonstrates that risk. The judge then decides whether the evidence warrants temporarily restricting the person the ERPO is against from accessing firearms.

In states that have ERPO laws, law enforcement officers or even other groups involving family or household members, intimate partners, employers or coworkers, healthcare professionals, or school personnel are authorized to petition the court for an ERPO against high-risk individuals.

Application of ERPOs has been challenging in many states. The use of ERPOs has been difficult for law enforcement because of the staffing and time commitment burdens to submit a petition, testify in court, serve the order, and remove firearms (Pear et al. 2021; Swanson et al. 2017). It may also be difficult to find and serve respondents, which is necessary for an ERPO to take effect (Pallin et al. 2020). Limited evidence at the individual level suggests that ERPOs may decrease firearm injury.

c. Large Capacity Magazine Bans

Klarevas et al. (2019)'s study found that bans on large-capacity magazines (LCMs) were associated with both lower incidence of high-fatality mass shootings and lower fatality tolls per incident. The rate of high-fatality mass shootings increased considerably after September 2004 when the federal assault weapons ban expired. 69 high-fatality mass shootings from 1990 to 2017, 49 occurred in states without an LCM ban in effect at the time and 20 in states with a ban in effect at the time.

One disadvantage underlying the suggestion of large capacity magazines ban in the whole country is that we cannot generate a conclusion about the effectiveness of the LCM ban because not all states will apply LCMs ban.

d. Leakage Plan and Threat Assessment

One encouraging way for mass shooting prevention is threat assessment through plan leakage. Leakage is defined as communication to a third party of intent to do harm to a target. Leakage is one of several types of warning behaviors that, when recognized and responded to, could prevent a mass shooting before it occurs (Peterson et al., 2021). One study of the 15 deadliest shootings from 1998 to 2018 found that 87% of perpetrators leaked violent thoughts or intent and 80% leaked their interest in mass killing specifically. Another study of 30 adult mass murderers found some form of leakage in 67% of cases.

Yet, if perpetrators who leak tend to be young and experiencing suicidal ideation, punitive measures could exacerbate their grievance and suicidality.

Therefore, Crisis response teams that respond to leakage with appropriate and holistic interventions, for example suicide prevention services, mental health services, or peer support, may more effectively prevent future violence.

e. Health and Mental Health Service Providing

Williamson et al. (2014) argue that pediatric psychologists and other health and mental health care providers could play an important role in the coordinated prevention of youth gun violence and its effects across multiple settings like youths' homes, schools, and communities. Indeed, the American Academy of Pediatrics (AAP, 2012) has taken a supportive position on educating physicians and other health care professionals about the effects of firearm-related violence, and has urged pediatricians to counsel parents who own guns about safe storage.

Results of a study showed that caregivers in the intervention condition reported increased safe firearm storage and increased limitations on child media usage compared to the control

condition (Barkin et al., 2008). This intervention is a good example of how health and mental health practitioners may impact family practices as well as promote youth safety.

Despite the benefits of these activities for families and youth, health and mental health care professionals have identified many barriers to gun safety counseling in pediatric settings.

Although primary care practitioners have indicated that addressing gun safety with families is important, practitioners have reported barriers like a lack of time for and comfort with such activities, and low feasibility and implementation of gun safety counseling and other types of in-office violence prevention strategies (Borowsky & Ireland, 1999; Johnson et al., 1999).

f. School Safety Measures

Pearce and Alleyne (2023) believe that addressing the enduring problem of gun violence in schools requires a whole approach to school safety and security that ultimately utilizes proven violence prevention practices, leverages federal funding for community-based intervention programs, as well as centers community voices in decision-making processes.

This approach encompasses initiatives like implementing critical support and intervention systems and embedding social and emotional learning in curricula, employing restorative discipline practices for instance mediation conferences, conflict resolution programs, youth courts, community-building circles, and proactive strategies to implement support and intervention systems, creating avenues to include community stakeholders' voices as well as experiences in decision-making.

However, there is a notable continued absence of direct, sustained gun control legislation at the federal level. While such preventive strategies are crucial for addressing America's gun violence epidemic, communities cannot do this work alone. Thus, government at all levels must institute commonsense gun violence prevention measures for example reinstating the assault weapons ban, and adopting extreme risk protection order policies to empower families, courts, and law enforcement to temporarily remove firearms from individuals in crisis.

Conclusion

As discussed in this chapter, there is an attempt to limit the fatality and restrict the frequent occurrence of mass shooting incidents by implementing multiple legal procedures for example background checks, extreme risk prevention orders, and large capacity magazine ban. Other strategies are suggested like assessing threats through leakage plan, providing health and mental health services to the gun-related victims, strengthening school safety in addition to other policy recommendations.

Analyzing different approaches, aiming to address mass shootings in America, may provide researchers with a comprehensive understanding about the mitigating strategies and public policies being implemented in order to check their effectiveness and reliability. Policy implications could be provided and further research may identify alternative solutions.

Public policies and preventive strategies that aim to address the phenomenon of mass shootings in America may enable researchers, public opinion and policy makers to assess the effectiveness and reliability of the current measures, identify their weaknesses and strength, and propose successful ways besides alternatives solutions to fight this deadly phenomenon.

General Conclusion

Mass public shootings that involve killing people indiscriminately with firearms in public places grow in frequency and fatality and continue to disturb the American society. These events have multiple factors and lead to disastrous consequences which require appropriate prevention policy and intervention strategies.

In this dissertation, we aimed to investigate the complex issue of mass shootings in the United States. Our central argument was that mass shootings stem from multifaceted factors, including easy access to firearms, mental health issues, domestic violence as well as media coverage. Through a comprehensive analysis of data, case studies, and expert opinions, we have provided substantial evidence supporting this argument.

Our research examined easy access and availability of firearms in the US, particularly high-capacity weapons, and its correlation with the frequency and fatality of mass shootings. Additionally, we explored the connection between mental health issues and the perpetrators of these tragedies. However, we acknowledged that mental health alone cannot fully explain these events.

Moreover, we analysed the strong influence of a culture that glorifies violence in media and entertainment. This cultural context, coupled with the ease of firearm access and potential mental health vulnerabilities, creates an environment conducive to mass shootings.

Our research questions delved deeply into specific aspects of this issue. Firstly, we explored the various factors contributing to mass shootings. As evidenced throughout this dissertation, a combination of factors plays an important role. Secondly, we examined the effectiveness of current prevention policies and intervention strategies. While some initiatives being taken to address mass shootings have the potential to be effective, our findings highlight the need for a more comprehensive approach.

Through this research, we have gained a clearer understanding of the multifaceted nature of mass shootings. By addressing the easy availability of firearms, providing accessible mental health services, and fostering a culture that values peace over violence, we can begin to address this issue.

Our research successfully achieved all of the objectives outlined in the introduction. We identified the key causes of mass shootings, analysed existing prevention strategies, and proposed recommendations for more effective intervention methods. Implementing and enforcing gun regulation laws strictly, reforming mental health services, funding research related to gun violence and promoting a culture of peace could solve the problem of mass public shootings. While further research is needed to fully understand and combat this complex issue, this dissertation offers valuable insights that can contribute to a safer future for individuals and communities in America.

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ملخص

لقد تزايدت حوادث إطلاق النار الجماعي في الولايات المتحدة الامريكية من حيث الوتيرة والوفيات وأصبحت عاملاً مقلقاً لاستقرار و سلامة المجتمع الأمريكي. وتهدف هذه الأطروحة إلى استكشاف الأسباب و التبعات المختلفة و المرتبطة بعمليات إطلاق النار الجماعية في أمريكا. علاوة على ذلك، فإن هاته الدراسة تجري تحليل شامل لطرق الوقائية الحالية، وإجراءات التدخل التي تهدف إلى معالجة حوادث إطلاق النار الجماعي هذا البلد. لقد تم إجراء العديد من الدراسات والبحوث لتحديد العوامل الرئيسية وراء الوفيات وتكرار حوادث إطلاق النار الجماعي. بالإضافة إلى ذلك، تم بذل العديد من الجهود لدراسة الاستراتيجيات والسياسات الفعالة لمعالجة الهجمات بالأسلحة النارية في الاماكن العامة بأمريكا. ومع ذلك، فإن السؤال الذي لم تتم الإجابة عليه هو ما إذا كانت الاستراتيجيات المطبقة للتصدي لأعمال إطلاق النار الجماعية فعالة أم أنه قد تكون هناك أساليب بديلة أخرى تحتاج إلى النظر فيها. وتستخدم هذه الدراسة أساليب وصفية وتحليلية تهدف إلى استكشاف العوامل المعقدة والتبعات المتعددة الأوجه لحوادث إطلاق النار الجماعية ثم تحليل التدابير الوقائية والاستراتيجيات لمعالجة هذه الظاهرة بشكل فعال. ويحدد البحث العوامل الرئيسية التي تساهم في عمليات إطلاق النار الجماعية، مثل أمراض الصحة العقلية، وسهولة الوصول إلى الأسلحة النارية، وثقافة السلاح، وعدم المساواة في الدخل. ويدرس آثار و عواقب الهجمات بالأسلحة النارية العامة مثل أزمة الصحة العقلية، وانخفاض رفاهية المجتمع، والاضطرابات الاقتصادية. كما تتطلب عمليات إطلاق النار الجماعية سياسة الوقاية واستراتيجيات معالجة مثل فحص الخلفية السلوكية للمقبلين عن شراء الاسلحة، وأوامر الحماية من المخاطر الشديدة لبعض الاشخاص، وحظر الأسلحة الهجومية، وتقييم التهديد، ودعم الصحة العقلية. وتساهم هذه الأطروحة في مزيد من البحث الذي يهدف إلى إيجاد فهم أفضل لظاهرة إطلاق النار الجماعي في أمريكا ثم توفير طرق أفضل لمعالجة هذه الافة.

الكلمات المفتاحية: إطلاق النار الجماعي، السيطرة على الأسلحة، القتل، الرابطة الوطنية للبنادق.