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School Shootings in the United States from 1997 to 2012: A Content Analysis of Media Coverage

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School Shootings in the United States from 1997 to 2012:
A Content Analysis of Media Coverage

by

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A thesis submitted in partial fulfillment
of the requirements for the degree of
Master of Arts
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ABSTRACT

This study is a content analysis of news articles of school shooting incidents that occurred within the United States between 1997 and 2012. This paper was designed to (a) address the current profile of school shooting offenders and offenses, (b) assess a proposed typology of school shootings, (c) consider common case processing characteristics for offenders of school shootings incidents, and (d) address the potential for offender and offense characteristics to affect the amount of media coverage an incident receives. The database of “Major School Shootings in the United States Since 1997” by the *Brady Campaign to Prevent Gun Violence* was used to compile a sample of 101 incidents in which a single offender committed a school shooting. To the extent possible, media accounts were used to corroborate details of each school shooting incident. Data pertaining to the offender characteristics, case processing characteristics, offense characteristics, characteristics regarding a typology, and media coverage characteristics were examined. The current profile and typology were, for the most part, upheld. Six variables proved to be significantly related to the total amount of media coverage an incident received: mental health history, school-related mass murder type, offender/victim type, total victims injured or killed, region of the U.S., and year of incident occurrence. Of these variables, three remained significant in a regression analysis: the school-related mass murder type, region of the U.S., and year of incident occurrence were predictive of the amount of media coverage an incident received. Implications and limitations of this study are discussed, and directions for future research are suggested.

CHAPTER ONE: INTRODUCTION

School shootings have frequently dominated headlines in the media with the occurrence of shocking cases like Columbine, Virginia Tech, and Sandy Hook. The mere mention of the names of the schools in which these incidents occurred creates a stirring image of fear and despair. With such apparent fear of these incidents as a national issue, it is questionable how often these incidents are actually occurring. Are they truly an issue of serious social concern in the United States? A quick look at crime statistics will show that school shootings are one of the least frequent crime occurrences in this country, with a frequency of about one incident each month (Muschert, 2007a). While this statistic is quite small and infrequent, one must question why the American public is so concerned about school shootings.

Most people in the United States, and likely in most places globally, are informed of current events of politics, entertainment, and crime through media sources. For many, mass media, such as newspapers and television, are main sources of news (Graber 1980). Keeping this media-informed perspective in mind, there are solid reasons to believe that the American public's opinion of crime is highly influenced by information from the media sources they view. The framing of news stories by media sources can easily inform and shape their consumer's opinions regarding a topic; therefore, we must consider how the media is framing school shooting incidents. If certain aspects of news stories are what captures the public's attention most vigorously, media sources are likely to report more often on these aspects. In regards to school shooting incidents, we must investigate what aspects of these crimes are most highly reported

through news sources, as these aspects are more likely to have influence on public opinion of these incidents.

The proposed study has four main objectives. First, the study aims to address the prevalence of certain characteristics across school shooting incidents, pertaining to the offenders involved in the incidents and to the offenses themselves. Are certain offender or offense characteristics more common than others across the distribution of school shootings that have occurred in the United States in recent history? Second, building on these data, this research examines whether a typology made from prevalent offender or offense characteristics from school shooting incidents is supported by incidents in recent United States history. Third, this study will address characteristics regarding the processing of each case through the criminal justice system. Finally, the identification of common characteristics of school shooting incidents, leads to the fourth aim designed to address how these characteristics are reflected in media coverage. Considering the somewhat obvious variation in media coverage based merely on popular knowledge of specific school shooting incidents, it is apparent that not all school shootings are given the same amount of media attention. This research examines the discrepancy found in the association between media coverage and specific characteristics relating to the offenses.

These questions are relevant to the field of criminology as they intend to build on the currently limited empirical research on the subject of school shootings. In addition, these questions may add to the current literature regarding media coverage of crime. The data for this research were collected specifically for its use in this study of school shooting incidents in the United States from 1997 through 2012. Accordingly, this study will be the first to use this particular data set. The findings of this research will pertain to the actual occurrence of these

types of incidents, which has increasingly become a social problem in this country over the past three decades. Now that the pervasiveness of school shootings is being addressed as an important area of interest in the field of criminology, we can work to understand this type of crime, as it is a social problem that will persist if we do not strive to comprehend the complex manifestations of the offenses in our society and the motivations of those who commit this crime. Identification of at-risk individuals and specific risk factors for the occurrence of these incidents can aid in the development in effective prevention programs. With the attention of school administration and state legislators, identified risk factors may lead to changes or regulations in accordance with preventative techniques on a local, state, and potentially nationwide scale.

CHAPTER TWO: A REVIEW OF THE LITERATURE

The relevant literature first discusses the definition of school shooting incidents, then delves into the historical context of school shootings, including the initial onset of incidents as an issue of national interest. Literature discussing the prevalence of school shooting incidents as an epidemic and as a social problem in need of attention is then presented. Next, a profile of school shootings is developed with the literature relevant to the time period of incidents studied within this paper. A typology of school shooting incidents developed by Muschert (2007a) is discussed as it relates to the characteristics of school shooters and school shooting incidents. Finally, media coverage as a vector for the formation of public opinions and understanding of crime is discussed.

What are School Shootings?

Before discussing the importance of understanding the impact of school shootings on our society, we must first understand what school shootings are. Literature concerning school shootings is limited, as this crime has only become a topic of interest in empirical research in since the mid to late 1990's. With the literature that has been compiled, it is difficult to find a consistent definition of what a school shooting incident entails. Harding and colleagues (2002) discussed one of the contributing issues in finding a consistent definition, which is that researchers create and use definitions tailored to the research questions specifically related to what they are studying. The several varieties of school shooting incidents to be included in a

single definition are also problematic, as types of incidents vary widely based on offender type and victims included in the incident (Muschert, 2007a).

One of the most basic definitions of a school shooting incident, proposed by Gerard and colleagues (2016), is as follows: “a school shooting incident consists of at least one person intentionally using a firearm and shooting at least one other person on school grounds.” (p. 23). The simplicity of this definition is problematic due to its specificity in consideration of offenders and victims in the incident. With the requirement of having one person shoot at least one other person, incidents in which a person only committed suicide on a school campus are excluded. In addition, incidents in which a shooting attempt was made, but resulted in no injuries occurred are excluded. The omission of incidents such as these from the overall definition of school shooting incidents is unwise, as these incidents can produce the same effect on the school population, as well as the local population, in terms of fear.

It has also been suggested that incidents in which the shooting was motivated by gang-related activity should not be included when defining school shooting incidents, regardless of the occurrence of the shooting on a school campus (Langman, 2009). I do not agree with this exclusion, as the motivation behind the incident does not alter the overall effect the incident may have on the school and the community, which is the fear induced by such a crime occurring on a school campus. Including the complexities which detail school shooting incidents, such as the motivation of the offender, will make a definition more cumbersome, but is necessary in order to make a cohesive and inclusive definition. Therefore, the definition of school shooting incidents produced for this study will aim to be as inclusive as possible for potential use in future literature pertaining to school shooting incidents. For the purposes of this study, I am defining school shootings as any incident in which a gun is fired on a school campus.

Historical Context of School Shootings

To truly understand the prevalence of school shootings in our society, it is important to first give a historical perspective of school shootings in the United States. When looking back to track the emergence of school shootings as an issue of national significance in the United States, Muschert and Carr (2006) identified 1997 as the onset of school shootings as a social problem. However, one must ask what caused the rising of school shootings as a social problem? According to Altheide (2002), one must first look at the discourse of fear and expectation of danger in the public that emerged in the 1980s. Through a qualitative analysis of newspapers from 1987 to 1996, Altheide found an increase in reported fear regarding the topics of children and the spaces they occupy (including schools and neighborhoods); the focus on these topics has evolved to become more generalized and pervasive as time went on, peaking in 1994.

The final argument made in Altheide's analysis is that it is necessary to take on "social action to protect children, as well as protect us from children," (Altheide, 2002, p. 246). This social action has mostly been seen in the strengthening of school safety measures, but this response is primarily a product of the public's fear of, and for, the children. This fear can be best summed up by Cohen's term for "moral panic," which is defined as follows: "A condition, episode, person, or group of persons emerges to become defined as a threat to societal values and interests; its nature is presented in a stylized and stereotypical fashion by the mass media" (Cohen, 1972, p. 46). This characterization by the media will be discussed later in the review of literature on media coverage of school shootings.

Addressing the "Epidemic" of School Shootings

Since school shootings have been identified as a pervasive social problem in the United States, multiple studies have been conducted to review the actual prevalence of school shootings

from the late 1990s and onward. Statistically, school shootings are quite rare when compared to other incidences of youth homicide. In a measure of suicides and homicides of youth ages 5-18 at school from the years 1992 through 2005, less than 2% of homicides involving school-aged youths occurred at school. Furthermore, it was estimated on average only 1 in every 2 million school-aged youths would die from a homicide or suicide on school grounds each year (Dinkes et al., 2006).

As previously noted, the literature surrounding school shooting incidents is rather limited, as empirical studies of such events have only recently begun to garner significant interest. It is true that school shooting incidents are rare in comparison to other crimes, but the impact that these incidents can have on communities at a local, national, and international level is cause for concern. These incidents have a severe impact on the victims of such crimes and to the surrounding population, in that a deep fear for schools and the youths within them is created (Gerard et al., 2016). This fear may be addressed by studies that determine common features of offenders involved in school shootings, and of the incidents themselves, as these studies may aid in identifying potential risk factors for school shooting incidents, and in turn may help to develop strategies for prevention of such crimes (Gerard et al., 2016). Unfortunately, the current base of literature is disproportionately focused on rampage-type incidents, in which multiple students and faculty are victims within an incident, whereas studies examining other varieties of school shootings, such as targeted endeavors, are relatively rare (Muschert, 2007a). In order to continue the endeavor for all-inclusiveness within the present study, all types of school shootings that fall under the definition criteria to be discussed will be included.

A Profile of School Shootings

In order to establish recognizable characteristics for potential prevention of school

shooting incidents, a profile must be made for school shooters and school shooting offenses themselves. In his meta-analysis of school shooting literature, Muschert (2007a) identified and discussed several characteristics and potential causes for school shooting incidents in relation to offenders of such incidents, which are grouped by individual, community, and social/cultural contexts.

Individual context characteristics of offenders include mental illness, identity of shooters, access to guns, peer relationships, and familial abuse. In terms of mental illness, shooters often display symptoms of depression or suicidal tendencies, in addition to a fixation on violent media. In a study of 41 offenders involved in 37 incidents within the United States conducted by Vossekui and colleagues (2002), 61% of offenders had a history of depression, and 78% expressed suicidal thoughts or attempted suicide. School shooting incidents are most frequently perpetrated by males (Newman, 2004). Adding on to this identity, white males are the more frequent perpetrators of these crimes (Schiele, 2001). Having access to firearms is the single characteristic found in every shooting incident, as it is a necessary prerequisite for an incident to occur (Muschert, 2007a).

Fractured peer relationships or ostracizing from peers is also found to be quite frequent in relation to school shooting offenders. Vossekui and colleagues (2002) found that 71% of their sample of offenders felt bullied or persecuted by others, and 75% had experienced rejection by peers (for example, a romantic breakup). In Leary and colleagues' (2003) examination of archival news media for 15 cases from 1995 through 2001, 80% of offenders were found to be teased or ostracized. Consequently, in 50% of cases, those persons who rejected the offender(s) were found to be victims of the school shooting incident that occurred. This is not to say that bullying is a cause for school shooting incidents, as not all people who experience rejection will

seek revenge through such a crime. However, in individuals who already possess existing dynamic risk factors for school shootings, peer rejection may act as a proximal risk factor (Wike & Fraser, 2009).

Adding onto peer rejection, familial neglect or abuse is also found to be frequent among school shooting offenders (Newman, 2004). Again, the presence of this factor does not indicate that abused children are more likely to commit such incidents. Rather, abuse or neglect in familial relationships may be a risk factor for school shooting incidents.

Characteristics within the context of communities in relation to school shooting offenders discussed by Muschert (2007a) are local youth social dynamics and school contexts. Intergroup conflicts, such as those presented in relation to gang-activity or generalized bullying, are frequently found to be present prior to school shooting incidents (Hagan et al. 2003). Conflicts found to be present between students and faculty members, or poor relationships between teachers and students in general, are also found to be contributing causes to school shooting incidents (Moore et al. 2003).

In regard to social and cultural contexts, the culture of violence that is found within the United States may aid in perpetuating school shooting incidents. The widespread availability and acceptance of guns in some communities within the United States may serve as a helpful factor to offenders seeking guns, and may therefore directly influence the frequency of events in such areas of the country (Webber, 2003). School shooting incidents may also be perpetuated by the presentation of violence in the media when detailing violent crimes, as potential offenders may see these violent acts as glorified by the amount of attention the perpetrators receive, and may therefore be influenced to commit such crimes themselves (Webber, 2003).

Violent ideation is hard to pinpoint in school shooting offenders, as most offenders have

no history of criminal behavior. Referring to the study by Vossekui and colleagues (2002), only 27% of offenders had been previously arrested. However, 31% of offenders had displayed past violent behavior and 59% had shown interest in violence, through means such as movies, video games, or writing.

As for the settings of school shootings, researchers have worked to identify when and where shootings are most prevalent. The timeline in which these events occur is cyclical, in that one would not expect a high prevalence of school shootings in the summer months of June and July or during the winter break often scheduled in December and January. This relative infrequency is due to the lack of classes during those months in primary and secondary schools in the United States.

Although school shooting incidents are quite varied, some typical characteristics of these offenses have been identified. School shooting offenders were often found to have left clues, either intentionally or unintentionally, indicating their thoughts or intentions concerning the shooting. O'Toole (2000) referred to this action as "leakage." In terms of frequency, Vossekui and colleagues (2002) found that 81% of incidents included at least one person who was aware of the offender's thoughts or intentions for the shooting.

Suicide as a post-offense action has also been identified as a common characteristic. Moore and colleagues (2003) suggested that suicidal action may be taken after committing the school shooting as an attempt to gain further attention from the media, as offenders may have seen similar incidents gain a great deal of media attention after committing such an act. With reflection on events prior to school shooting incidents, a triggering event for the offender, is sometimes identified as a potential cause for the crime. For example, an offender may have been involved in an event that caused severe humiliation, such as a romantic breakup or public

scolding by a teacher. These events incite vengeance against those individuals who wronged the offender, and the subsequent school shooting incident may be used by the offender as a way to send this message of vengeance to those individuals (Newman, 2004).

This targeted motivation for school shooting incidents, however, is not found to be consistent across all incidents. There are mixed findings in the current literature about the relationship between offenders and their chosen victims in school shooting incidents. While students or teachers are identifiable as targeted victims in some incidents, other incidents seem to involve an offender who decides to shoot at random, with no identifiable victims. In other incidents, the offender does not identify a specific person as a victim, but wants to victimize the school as a whole (Newman, 2004; Muschert, 2007a). This difference in motivation will be discussed next in the typology of school shootings presented by Muschert (2007a).

One particular area of interest that has not yet been addressed by empirical research is the processing of school shooting offenders' cases through the criminal justice system. A number of case studies have considered the process and outcome that offenders face when proceeding to trial. However, to date there have been no empirical studies of the case processing of school shooting offenders with a sample size as large as the current study. Considering the public reaction to such crimes, as well as the political and legislative reaction, a look at the rates of transfer for juveniles to the adult court system and sentencing characteristics would be particularly of interest.

Typology of School Shootings

In 2007, Muschert conducted a meta-analysis of "Research on School Shootings," which examined much of the data available up to 2007 in order to create a typology of school shootings and their offenders. This typology is characterized as follows: rampage shootings, targeted

shootings, school-related mass murders, terrorist attacks, and government shootings. For the purposes of this study an abbreviated version of Muschert's typology will be used.

By far the most frequent type of school shooting reported in the media is *rampage shootings*, in which a member, or former member, of the school attacks the school. Newman (2004) identified a few conditions for this type of shooting in that it is “an institutional attack [that] takes place on a public stage before an audience, is committed by a member or former member of the institution, and involves multiple victims, some chosen for their symbolic significance or at random” (Newman, 2004, p. 50). The motivations for this type of shooting are not often aimed at a specific person, but are instead focused on the school itself as a target. As with most mass shooters, the rampage school shooter often attacks as a way to gain some form of recognition or power, or to exact revenge on the community. Some notable examples of rampage shootings are the shootings of Columbine High School in 1999, in which 16 individuals were killed and 23 were wounded, and the Virginia Tech shooting, in which 32 individuals were killed and 15 were injured.

Targeted shootings are similar to rampage shootings in that they are committed by a member or former member of the school, but these types differ in their motivation. Targeted shootings are usually motivated by revenge against a specific individual or individuals, which arise due to situations involving an interpersonal dispute. This typology can therefore include interpersonal conflicts relating to crime, organized or otherwise. Muschert (2007a) remarked that incidents involving gang activity would often fall into the targeted type, as these incidents often involved an interpersonal conflict. However, for the purposes of this study, gang activity is considered a separate motivation for an incident to allow for the consideration of this potential form of crime as a contributing factor to the occurrence of a shooting on a school campus.

School-related mass murders are similar to rampage shootings in their motivations, in that the shooter wants to gain some sort of recognition from the community or the perceived power therein, but differ in the type of offender. A school shooting is considered a school-related mass murder when the incident is perpetrated by a non-member, neither former nor present, of the school, most typically an adult.

I have chosen to leave out two typologies from the analysis in this study. The typology of terrorist attacks was excluded due to the lack of terrorist attacks in the data set of incidents between 1997 and 2012. The typology of government shootings was excluded due to the lack of relevance for the analysis in this study, in that government agents are legally permitted to use the weapons they possess on school campuses, in addition to the lack of a presence of this typology in the data set. This abbreviated typology will be applied to all incidents within the data set for this research.

The previously mentioned definition for school shootings provided for the purposes of the present study, which stated that a school shooting incident is included as long as a gun has been fired on a school campus, may provide for the inclusion of some incidents into the dataset that do not fit within the provided typology. Notably, incidents of accidental shootings, severe mental illness, and suicide-only cases are not addressed by Muschert (2007a), and are therefore not provided a place within the set typology. Muschert may have neglected to include these incidents due to a clear lack of motivation in such cases, which is problematic considering motivation is a key element in deciphering the typology.

It is arguable, however, that in the case of suicides an offender may be of the targeted type, as they are targeting themselves as a victim. Regardless, the occurrence of a suicide on a school campus requires the intent by the offender to commit this act at that particular location for

a notable reason. Therefore, incidents in which the only victim is the offender must be included in the data.

Accidental shootings may prove to be incapable of being sorted into a type, as the motivation behind bringing a gun onto a school campus cannot truly be determined if the plot is thwarted by a misfire of the gun before the potentially intended crime could occur. With the consideration that an accidental shooting may be the result of malicious intent, these incidents must be included within the data. It is necessary to consider mental illness as a primary motivation for the occurrence of a school shooting incident, as it is a clear and identifiable characteristic present among many offenders. Mental illness as a motivation, however, should only be considered when there is a clearly present reason to believe that the offender was not targeting any victims in particular, and that the presence of their mental illness was directly related to the committing of this crime.

Media Coverage of Crime – The Shaping of Public Opinion

The prevalence of crime perceived by the public in the United States is often skewed due to the perspective expressed by American media, as the media serve as most Americans' primary source of information about crime-related issues (Beckett & Sasson, 2004; Simmons, 2012). Surrette (1992) explained that people construct an image of the world based on the knowledge they obtain from the media. Applying this notion to crime, Graber (1980) argued that most people learn about crime from mass media, and both their knowledge and their interpretations of events are strongly influenced by the media.

Several studies have been conducted to assess the extent of the effect that media coverage of crime has on our understanding of and opinions of crime. Gamson and colleagues (1992) described how media shape our “social reality” by telling readers what social issues to consider

and what opinions readers should have of these social issues. McCombs and Shaw (1972) detailed how producers of mass media have an important role in shaping the reality that is displayed in news content and is subsequently digested by its consumers. News producers have the power to highlight or downplay whichever aspects of stories they see fit in order to further whatever agenda they have in mind. In order to maintain salience of a particular news story, the focus of the mass media will shift to different aspects of a news story in order to cycle through all attributes relevant to the chosen agenda.

There have been mixed findings regarding the public response to media exposure of crime, be it through television or newspaper sources. Gerbner and Gross (1976) expressed that “television is the central cultural arm of American society,” and, therefore, hypothesized that frequent viewers of television were more likely to believe they would fall victim to a violent crime than their infrequently viewing counterparts. This fear of crime associated with exposure to media has been upheld in several studies on the topic (Gerbner & Gross, 1976; Begotys et al., 1988; Gordon & Heath, 1981). However, the direction of this association has been debated with inconclusive results, indicating that the fear of crime may not be caused by media exposure, but having a fear of crime may lead to the consumption of crime-related media (Gomme, 1986; Skogan & Maxfield, 1981). Regardless, an association between fear of crime and consumption of crime-related media has been established.

Chiricos and colleagues (2000) determined that there are three dimensions related to perceptions and fear of crime regarding crime-related media: the perceived realism of the content, the actual content that is portrayed, and how the content is framed. The current dilemma due to the presentation of crime in the media is a public misunderstanding of the current state of crime in the United States. Both international and domestic studies have identified a “perception

gap,” in that public perceptions of crime trends are often at odds with statistical trends of crime (Roberts & Hough, 2005). Although crime trends are historically low, recent surveys of Americans’ perceptions of crime reveal that the public often believe crime rates are still increasing from previous periods, and have held this view for several years in a row (Swift, 2016). This perception is more than likely due to the presentation of violent crime through media sources at a rate much higher than these crimes are actually occurring.

Tankard (2001) explained “media framing,” as “a central organizing idea for news content that supplies context and suggests what the issue is through the use of selection, emphasis, exclusion, and elaboration” (pp. 100–101). In regards to school shootings, this media framing can be used to cycle through all details of interest within a school shooting incident, from details such as the race or criminal history of the offender, to the academic background of the victims. This media framing can become potentially dangerous when the focus of media attention is of the violent details of the incident, as these details may in turn influence future events.

Referring back to Cohen’s moral panic, one can get a picture of the public’s view on school shootings based on how they are presented by the mass media. As such, the media are considered to present the moral panic in a “stylized and stereotypical fashion” (Cohen, 1972). Therefore, looking at the patterns of content within media coverage of school shooting incidents in particular should provide the characteristics of this current case of moral panic. However, one should keep in mind that the different outlets for media coverage may have variation in the information contained within them, as well as the perspectives they give to the public. Burns and Crawford suggested that “It is possible that analyses of televised accounts of the shootings differ from what we encountered in the printed news” (Burns & Crawford 1999, p. 159). In addition,

Chiricos and colleagues (2000) found that television news has a greater impact on fear of crime than newspapers. Accordingly, it is important to include both visual and printed news sources in an analysis of media coverage.

Media Coverage of School Shootings

With the current understanding of the relationship between media coverage and public opinion of crime in general, we must consider what factors are present specifically in more sensational crimes like school shootings. The “if it bleeds, it leads” motivation for the media, presented by Maguire and colleagues (2002), maintains that news media are biased towards violent events in order to generate viewer interest. This motivation is supported by the rarity theory, which suggests that, due to increased human interest appeal, incidents involving “unusual” victims or circumstances (for example, incidents with multiple victims or young victims) receive greater amounts of media attention than those victims or circumstances that are deemed “common” (Lundman, 2003; Pritchard & Hughes, 1997). Due to what has been discussed as standard human interest, the narrative appeal of shocking events such as the Columbine school shooting incident is of interest to the public and is, therefore, of interest to news media producers (Lawrence, 2001).

In regard to school shooting incidents, media coverage of such incidents allows the myth of the school-aged “superpredator” to be perpetuated (Muschert, 2007b). This myth, originating with the Columbine school shooting incident, paints a picture of a suburban rampage school shooter that the American public has grown to fear. This particular fear, while potentially warranted due to the perpetration of any school shootings, is unwarranted due to the rarity of such offenders committing these crimes. Muschert (2007b) explained that the superpredator myth “reinforces and legitimates status quo framing of the larger problem of juvenile violence,”

(pp. 365). Some of the negative effects this myth has on the juvenile justice system is that it perpetuates the increased transfer of youths to the adult court system, the imposition of harsher sentences for juveniles, and an overall erosion of confidence in the juvenile justice system (Kappeler & Potter, 2005). When considering the implications of media coverage for school shooting incidents, we must consider not only the fear that school shootings create as a crime of national interest, but also the negative stereotypes that are perpetuated through media sources that can negatively affect perceptions of youth within America.

There is also evidence of a “contagion” effect for mass killings involving firearms found by Towers and colleagues (2015), in that such incidents can be influenced by similar events in the immediate past. For school shootings, Towers and colleagues (2015) reported that an incident is contagious for an average of 13 days, and can result in a minimum of 0.22 new incidents after its occurrence. This contagion effect is arguably brought about by media sources that consistently give reports of the incident for several days immediately following the shooting in order to keep the public informed on the details of the incident. Therefore, we must consider the potential implications that media coverage of school incidents may have regarding the occurrence of future incidents.

CHAPTER THREE: METHODOLOGY

The methodology of this paper begins with discussing the objectives for the proposed research and the associated hypotheses. It then delves into the source for the data from the Brady Campaign to Prevent Gun Violence, with a detailing of the inclusion criteria for the school shooting incidents. This background leads to a discussion of the construction of the dataset using the LexisNexis database and the inclusion criteria for media sources. Ethical concerns for this research process are addressed. Next, the concepts for school shooting offenders, case processing characteristics relating to offenders, school shooting offenses, school shooting typology, and media coverage are discussed in terms of their operationalization and coding structure as independent and dependent variables. Finally, the research design, coding reliability, and data analysis plan for the collected data are explained.

Objectives

Of the four total aims for this study, three are descriptive and the fourth is analytical. The data collected in this study is first intended to address the descriptive characteristics of the offenders and of the offenses themselves, in addition to characteristics of the processing of the offenders through the criminal justice system. Characteristics relevant to the offenders and incidents are then used to classify the school shooting type and later to evaluate the typology of school shootings presented by Muschert (2007a). Subsequently, the data collected on media coverage of each incident is compared to the media coverage of other incidents in order to analyze any differences that may be due to associated offender or offense characteristics.

Hypotheses

The limited, yet valuable literature reviewed for this study has led to the formation of eleven directional hypotheses, in relation to the final objective for this study. In keeping with conventions, null hypotheses are stated first. The specific alternative hypotheses are identified with explanations why these predictions were made.

H₀₋₁: Offender gender will have no effect on media coverage for an incident.

H₁₋₁: Incidents involving a female offender will receive more media coverage than incidents involving a male offender.

This hypothesis is reflective of the rarity theory proposed by Pritchard & Hughes (1997), in that the infrequency of females being offenders of school shootings will attract more media attention, and thusly the attention of the public.

H₀₋₂: Offender race will have no effect on media coverage for an incident.

H₁₋₂: Incidents involving a non-white offender will receive more media coverage than incidents involving a white offender.

Although potentially controversial, this hypothesis is also reflective of the rarity theory, in that non-white offenders are scarcer than white offenders and, therefore, will attract more media attention due to their scarcity.

H₀₋₃: Offender school membership will have no effect on media coverage for an incident.

H₁₋₃: Incidents involving an offender who is not a member of the school will receive more media coverage than incidents involving an offender who is a member of the school.

Due to the perceived rarity of offenders who are not members of the school on an academic level or by employment, it is likely that incidents committed by such people will receive more media

attention. This prediction is made based on public fear that is created by the thought of strangers randomly entering our schools and threatening the lives of our children.

H_{0.4}: Offender mental health will have no effect on media coverage for an incident.

H_{1.4}: Incidents involving an offender who has a reported history of mental health issues will receive more media coverage than incidents in which an offender has no mental health history.

This hypothesis is the first that is not reflective of the rarity theory, as literature such as the previously discussed study by Vossekuil and colleagues (2002), indicates that the majority of offenders have a history of mental health problems. However, the publicly held stereotype of offenders often includes the presence of mental health histories with extreme diagnoses.

Therefore, those incidents may receive more attention by the media as they are consistent with popular public opinion.

H_{0.5}: Offender intent via social media or peer knowledge will have no effect on media coverage for an incident.

H_{1.5}: Incidents with an offender who expressed his/her intent on social media or to their peers will receive more media coverage than incidents in which an offender did not express intent.

Similar to the previous hypothesis, a more recent development in public opinion of school shootings pertains to the use of social media prior to the incident occurrence. As the use of social media is a relatively new form of socializing in our society, the potential for its misuse is potentially frightening to the public. Therefore, it is likely that incidents using such means to discuss plans of school shooters would receive higher amounts of media coverage.

As the characteristics within the typology for school shooting offenses relate to both offender and offense characteristics, hypotheses regarding the school shooting types are separately categorized.

H₀₋₆: Rampage typology will have no effect on media coverage for an incident.

H₁₋₆: Incidents that fall into the rampage type will receive more media coverage than incidents that do not fall into this type.

The rampage type of incident typically involves higher counts of victims who are injured or killed in a school shooting incident. Therefore, the public fear surrounding such tragedies is likely to fuel higher amounts of media coverage for these incidents.

H₀₋₇: School related mass murder typology will have no effect on media coverage for an incident.

H₁₋₇: Incidents that fall into the school related mass murder type will receive more media coverage than incidents that do not fall into this type.

Similar to Hypothesis 3, which predicts higher media coverage for incidents including offenders who were non-members of the school, this hypothesis predicts that types of incidents involving non-members will receive more media coverage.

Two additional hypotheses were formulated with respect to the potential effect that offense characteristics may have on the amount of media coverage received.

H₀₋₈: Victim/offender type will have no effect on media coverage for an incident.

H₁₋₈: Incidents that fall into the single offender/multiple victim type will receive more media coverage than single offender/no victims, suicide, or single victim type.

H₀₋₉: Total number of victims injured or killed will have no effect on media coverage for an incident.

H₁₋₉: Incidents with a higher count for total victims injured or killed will have more media coverage than incidents with lower counts for total victims injured or killed.

Both of the above hypotheses are similar to Hypothesis 7, in that higher amounts of media coverage are expected in incidents that involve higher counts of victims injured and killed.

With the consideration of the “superpredator” myth and resulting implications presented by Muschert (2007b), it is likely that the majority of offenders within this dataset will be processed in the adult court system and these offenders will likely receive harsh sentences. Therefore, two additional hypotheses were created regarding the case processing of offenders of school shootings.

H₀₋₁₀: The majority of offenders will not be processed in the adult criminal justice system.

H₁₋₁₀: The majority of offenders (i.e., more than half) will be processed in the adult criminal justice system.

H₀₋₁₁: The majority of offenders will not receive sentences of more than 50 years in prison or a death sentence.

H₁₋₁₁: The majority of offenders (i.e., more than half) will receive sentences of more than 50 years in prison or a death sentence.

Data Set - Brady Campaign to Prevent Gun Violence

The initial data set used for this content analysis comes from the Brady Campaign To Prevent Gun Violence, which has compiled a record of all school shooting incidents from January of 1997 through December of 2012 (N=202). This document includes the date and location for each incident, as well as a small detailing of each incident. The record also includes a source, including a title, publisher, and date published, for each incident from which their data were compiled.

The Brady Campaign was created in 1974, which makes this resource valuable from a historical perspective. Since this organization is politically focused, they have worked to the fullest extent to collect all data necessary for their statements. Therefore, the data they have collected can be considered reliable, to an extent. It is advantageous that the inclusion criterion for being in this data set was noted by the Brady Campaign as such: the school shooter was “directly linked to the school and at least one person was shot on school property” (Brady Campaign to Prevent Gun Violence, 2014).

This data set has some drawbacks mostly due to the fact that the data were compiled from a single media source per incident. Sources for the data range from reputable national and international news sources to the Wikipedia List of School Shootings. This variation and limitation in source material make the reported data somewhat unreliable, as we are now relying on sources that may not report entirely accurate information or that may be incomplete. This study was designed to run each incident in this data set through the LexisNexis database for further stories with the hope that a more accurate detailing of each incident can be found.

Inclusion criteria for incidents in this study are as follows:

1. shooting must occur on school campus within the United States;
2. shooting must include at least one offender with at least one firearm reported;
3. shooting must include at least one shot reported fired on the school campus; and
4. shooting must be reported at least twice through a major world publication, newspaper article, magazine article, wire service, blog¹, or news broadcast.

From the total number of school shootings within the data set (N=202), a sample of 117 was made using the above inclusion criteria. Approximately 42% of the incidents had to be

¹ A blog is an article by a major news source, such as the *New York Times*, that is only accessible online and is not physically printed by the media source.

eliminated from the final sample. Of the 42% incidents that did not meet the inclusion criteria, 50% (n = 42) did not occur on a school campus, 1% (n = 1) had no gun reported, 6% (n = 5) had no shots reported as fired, 29% (n = 25) were insufficiently reported, and 14% (n = 12) were only conspiracies with no actual incident that occurred. Those incidents that did not meet the inclusion criteria were not included in the next step of data analysis using LexisNexis.

As shown in Table 1, the sample of 117 incidents included 11 incidents in which there were multiple offenders and 5 incidents in which no offenders were apprehended. Considering 86% of the incidents were known to be single-offender only incidents, a decision was made to create a single-offender only sample for further analysis. Incidents with no identified offender needed to be dropped, as they would not allow for testing of any hypotheses regarding offender characteristics. Due to the complications in analyzing multiple offender characteristics for a single incident, the final sample of incidents included in the analysis was reduced to 101 in order to account for single-offender only incidents.

Table 1. Offenders Involved in School Shooting Incidents

Variable (N = 117)	Frequencies (%)
Offender/Victim Type	
Single Offender/Single Victim	37 (31.6)
Single Offender/Multiple Victims	47 (40.2)
Multiple Offenders/Single Victim	2 (1.7)
Multiple Offenders/Multiple Victims	9 (7.6)
Unknown Offender(s)/Single Victim	3 (2.6)
Unknown Offender(s)/Multiple Victims	2 (1.7)
Single Offender/Only Suicide	10 (8.5)
Single Offender/No Victims	7 (6.0)
Number of Offenders	
Mean (SD)	1.1 (0.4)
Median	1
Mode	1
Range	1-3

The exclusion of multiple-offender incidents may be considered problematic when considering the theoretical basis of public fear in relation to crime-related media consumption. Excluding multiple-offender incidents from analysis of school shooting characteristics for those incidents and the related amount of media coverage requires that we ignore the public fear associated with these multiple-offender incidents in comparison to single-offender incidents. I would argue, however, that the public fear of school shootings may be consistent across school shooting incidents, regardless of the number of offenders involved. Potentially, the occurrence of such an incident is what may relate most highly to the amount of media coverage received, and subsequently to public fear. This postulation can be assessed once further analyses are conducted regarding offender characteristics and offense characteristics, as any findings of significant relationships between any offender-level variables and the total amount of media coverage received may be indicative of further analysis being necessary for incidents including multiple offenders. However, significant relationships found between offense-level variables and media coverage may support the notion that it is the crime itself that is sensational, not the offender(s) of the crime.

Further support for the decision to exclude multiple offender incidents is found when considering potential inter-group differences of single-offender school shootings versus multiple-offender school shootings. The separation of single-offender incidents from multiple-offender incidents was necessary due to fundamental differences in characteristics of the incident that would be best accounted for by separating the groups. Were multiple-offender incidents to be analyzed on a single-offender level, an exclusion of one or more offenders involved in the incident would be necessary, thus eliminating the possibility of analysis of offender characteristics for those offenders who were excluded. Rather than choosing an offender to

represent the offenders as a whole for an incident in order to include multiple-offender incidents, restricting further analyses to single-offender incidents allows for the analysis of what is a representative sample of school shooting incidents committed by an offender acting alone. Moreover, single offenders may differ from multiple offenders on a number of characteristics such as mental health or child maltreatment history, and motivations for involvement in the school shooting.

Dataset Construction

The data set was constructed using the Brady Campaign Database supplemented by LexisNexis. LexisNexis is an expansive and exhaustive data source in that it reports all data found under the key terms searched. The expansiveness, however, can be troubling due to the overwhelming amount of data produced with a search through the database. Therefore, inclusion criteria for media sources must also be created for this data, which are as follows:

1. Source must come from a major world publication, newspaper article, magazine article, wire service, blog, or news broadcast.
2. Source must be within the two-year period immediately following an incident.

Each incident in this sample was run through the LexisNexis database of major world publications, newspaper articles, magazine articles, wire services, blogs, and news broadcasts with national and international perspective in order to get a picture of the total amount of media coverage given to the incident over a two-year period. A major news publication is considered a large publication source, such as the *New York Times* or the *Los Angeles Times*. Newspaper articles entail those articles published in other non-major news sources, both in print and online. Magazine articles are those articles that are published in magazines such as *Newsweek* or in academic magazines, which includes articles that are scholarly but not peer-reviewed, and can be

either in print or online. Wire services are those news sources in which information is used and spread by other news organizations. The overwhelmingly used newswire encountered in this research was the Associated Press. Blogs are alternative publication resources used by major news sources such as the *New York Times* and also include articles posted only online. News broadcasts are transcripts of broadcasts on relevant material created by news sources such as *CNN* and *CBS*.

Results were specifically grouped from the start date of an incident through the date two years after. For example, the incident in Littleton, CO that occurred on April 20, 1999 would include all reported results on LexisNexis from April 20, 1999 through April 20, 2001. The two-year inclusion period was chosen to account for the expected conclusion of all case-processing characteristics for the incidents, if those incidents were applicable to proceed to a trial.

Results were searched for by the use of key terms, specifically modeled as: “Year of Incident” AND “City Incident Occurred In” AND school AND shooting (for example, 1999 AND Littleton AND school AND shooting). While vague, the use of these terms in a search of LexisNexis allowed for a thorough assortment of news coverage for the incident. The drawback for using such vague search terms was the few unrelated articles that were reported in results, such as situations such as basketball games or rifle competitions in which the words “school” and “shooting” were applicable to the time and location for those events. However, these unrelated articles negligibly affected the number of results reported in the total amount of media coverage, which was concluded from a brief analysis of a few high-profile incidents within the data set. From analysis of the incidents in Littleton, Red Lake Indian Reservation, and Newtown, it was found that 4.6% of articles were not directly related or referencing the school shooting

incident. Accordingly, it can be assumed that a similar proportion of articles were unrelated in the total media coverage calculated for all incidents within the data set.

Ethical Concerns

There are no ethical concerns for this study, as the findings of the study have no direct effect on the offenders of the school shooting incidents. However, since this study is looking at media sources in relation to school shooting incidents and how they present each incident, there is a possibility for some sort of public backlash. Scharrer and colleagues (2003) found that “news media tends to absolve itself from responsibility for school shooting incidents” (Scharrer et al., 2003). Therefore, any evidence of differential or biased reporting found based on the characteristics of the school shooter or school shooting may be seen as criticism by mass media. These findings may generate lead to further research into the media coverage of school shootings and the contagion effect they may have.

Variables

The sample of incidents was coded for 65 independent variables regarding offender characteristics, case processing characteristics, offense characteristics, and typology characteristics, in addition to the dependent variable of total amount of media coverage (see Appendix A for codebook). The categorization of independent variables can be seen in Table 2 (See page 31).

All selections for coding characteristics were made on the basis that the characteristic was reported in at least two corroborating major world publications, newspaper articles, magazine articles, wire services, blogs, or news broadcasts. Using the method provided by Farrell et al. (2011), the two confirming media sources must not be from the same source (e.g.,

Associated Press) and if news sources provided conflicting information, the information reported more frequently and more recently would be coded.

Dependent Variable

Media coverage, as the dependent variable of interest, was operationalized using the total story count from the media sources generated through LexisNexis, including major world publications, newspaper articles, magazine articles, wire services, blogs, and news broadcasts. The inclusion of all of these different types of media sources should give a broad perspective of the total media coverage of an event.

Independent Variables

The first set of independent variables of interest can be broadly defined as “offender characteristics,” which are specifically referring to the characteristics of the school shooter in a particular incident. These characteristics are those that are specifically applied to the offender and may be of interest to the media. The *15 offender characteristics* included were sex, age, school membership status, race, grade, reported mental health history, reported diagnosis of mental health, reported use of medication, reported type of medication used, reported prior antisocial behavior, reported prior criminal record, reported bullied, reported abused, reported knowledge of intent by peers, and reported intent on social media.

Sex was coded dichotomously as male or female. *Age* was coded continuously to account for large age range of offenders (age range from age 6 to 67), and then was coded into categories to apply to typical school age ranges including ages 6 through 10 (typical for elementary school), ages 11 through 13 (typical for middle school), ages 14 through 18 (typical for high school), and ages over 18 (typical for college and out of school). The coded age was the reported age of the offender at the time of the incident. *Race* was coded as White, Black, American Indian/Alaskan

Table 2. Independent Variables by Category

Offender Characteristics	Case Processing Characteristics	Offense Characteristics	Typology Characteristics
Sex	Offender arrested	Offender/victim type	Primary motivation for crime
Age at incident occurrence	Processed as juvenile or adult	Single offender/victim type	Evidence of rampage
Race	Number of charges	Number of offenders	Evidence of targeted
School membership	Charged with murder	Total victims injured or killed	Evidence of school-related mass murder
Grade	Charged with manslaughter	Total victims injured	
Reported mental health history	Charged with attempted murder	Students injured	
Reported diagnosis	Charged with assault	Teachers injured	
Reported use of medication	Charged with weapon at school	Staff/admin. injured	
Reported type of medication	Charged with weapon at school	Officers injured	
Reported prior antisocial behavior	Charged with reckless endangerment	Non-affiliated individuals injured	
Reported prior criminal record	Charged with felony weapon	Offender(s) injured	
Reported bullied	Charged with terrorist act	Total victims killed	
Reported abused	Plea	Students killed	
Reported peer knowledge of intent	Death penalty sought	Teachers killed	
Reported intent on social media	Conviction	Staff/admin. killed	
	Sentence	Officers killed	
		Non-affiliated individuals killed	
		Offender(s) killed	
		Offender killed at the scene	
		Offender suicide	
		Total number of weapons used	
		Number of guns	
		Number of knives	
		Number of bombs	
		Number of other weapons	
		Type of community	
		Type of school	
		Region of the U.S.	
		State within the U.S.	
		Month of incident occurrence	
		Year of incident occurrence	

Native, and Asian/Pacific Islander to account for race options available on the U.S. Census. Race was only included in incidents in which the race was specifically noted within the media source or if the race was easily discernible from a picture attached to the media source.¹ *School membership* was included as a measure of typology and to analyze the prevalence of student shooters relative to adult shooters and shooters that were not at all affiliated with the school. *Grade level* was included in order to attempt to categorize all offenders who were reported as students of the school in which the offense took place. Grade level was included in addition to the measure for age in order to compile a more cohesive picture of offenders, in addition to creating a thorough coding scheme that used multiple variables for similar measures just in case a variable was found to be unreliable or to have insufficient data reported.

Mental health status was included as a measure of diagnosed disorder prior to the incident in order to analyze the prevalence of potentially mentally disturbed shooters within the data set. This variable required media sources to mention a history of mental illness prior to the occurrence of the school shooting incident, not just a diagnosis given by a mental health professional once a trial has begun. If a mental health history was mentioned, the diagnoses were categorized as depression, bipolar, schizophrenia, anxiety, autism, ADHD, or other. These diagnoses were chosen due to their prevalence among the data set. If an offender was mentioned as having multiple disorders, the more serious diagnosis was coded. For example, if an offender was diagnosed with depression and anxiety, depression was coded as the disorder because depression would be considered the more serious disorder. A measure of *use of psychotropic medication* by the offender was recorded if media sources reported evidence of past or present use. If use of any medication was recorded, the type of medication was coded as antidepressant, anti-anxiety, or other. If more than one type of medication was mentioned in use, the medication

used to treat the more serious disorder was coded. For example, if an offender was using medication to treat both depression and anxiety, the antidepressant would be coded as the more serious medication.

A measure of *prior antisocial behavior* was recorded based on whether an offender was reported as showing a pervasive pattern of disregard and violation of rights of others in their past behavior. For example, prior antisocial behavior would include incidents in which offenders showed previous inclinations or acts of violence towards others. *Prior criminal record* of the offender was included to account for any past criminal behavior, regardless of the crime and whether the offender was a juvenile at the time. A measure of whether the offender was *bullied* or not was included to analyze the prevalence of bullying as a potential means of motivation as well as to analyze the frequency of bullying reported within media coverage of the incident. A measure of whether the offender was *abused* or not was included to assess the prevalence of abuse in the home in reference to possible offender motivations. *Knowledge of intent* recorded either through *social media* or *peer relationships* is reason for concern in school shooting incidents; therefore, a measure for each was created. If social media belonging to the offender, for example a blog or Facebook page, was used by the shooter to express intent for the shooting, or if in interviews with the offender's peers it was revealed that they had knowledge of the offender's intent, these data were recorded.

Details of how a case was processed within the criminal justice system were of interest and were coded into 15 different variables. Obviously, these *case processing characteristics* are only applicable if the offender was identifiable and was not dead. Therefore, it was first recorded whether or not the offender was *reported as arrested* for the offense. A measure of which *criminal justice system* the offender was processed in was categorized as either juvenile or adult,

or not competent to stand trial in those cases in which a distinction for case processing could not be made because the offender could not go to trial.

The *number of charges* brought up against a person was recorded continuously to account for the number of charges ranging 1 to 21. The number of charges recorded was the final number of charges reported after any reductions of charges due to a plea deal and in accordance with the final conviction made. The *types of charges* brought up against an offender were sorted into murder, manslaughter, attempted murder, assault, weapon at school, reckless endangerment, felony weapon, and terrorist act. These charge types were coded dichotomously as “yes” or “no” as to whether or not they were charged with any type of the charge or not at all. The *type of plea* the offender entered was recorded as guilty, not guilty, not guilty by reason of insanity (NGRI), guilty but mentally ill (GBMI), self-defense, Alford plea (guilty plea without admitting criminal guilt), or no contest. These categories were determined from the types of pleas that were reported within the media sources assessed for each incident. A measure of whether or not the *death penalty* was sought against the offender was recorded to analyze the prevalence of the death penalty sought among such offenders. The *type of conviction* the offender received was recorded as guilty, not guilty, NGRI, GBMI, charges dropped, or plea deal. A differentiation of plea deal from just guilty was made due to the prevalence of offenders who received a plea deal in exchange for a reduction in charges. The *type of sentence* received was categorized as juvenile sanctions, probation, treatment, jail time, up to 10 years in prison, 10-25 years in prison, 26-50 years in prison, 51 or more years in prison, life with the possibility of parole, life without the possibility of parole, or the death penalty. The type of sentence recorded was the total sentence for all charges of which they were convicted. For offenders sentenced to life in prison, it was assumed that they had the possibility of parole if not otherwise stated.

The other set of independent variables of interest is referred to as *offense characteristics*, which are those details that pertain to the school shooting as an event. These details are separate from the offender characteristics as they deal with the actual action and setting of the offense. The 31 *offense characteristics* included the victim/offender type, whether or not there were multiple shooters in the incident, what type of weapons were used in the shooting, what the motivation for crime was, body count of both injured and killed individuals, whether the shooter(s) committed suicide during the offense, the type of community the school was in, the state the incident took place in, and the date of the incident. The type of *offender/victim situation* was coded as either single offender with a single victim, single offender with multiple victims, multiple offenders with a single victim, multiple offenders with multiple victims, unknown offender(s) with a single victim, unknown offender(s) with multiple victims, single offender who only committed suicide, or single offender with no victims.

In situations in which there were a single offender or multiple offenders and only one victim, the type is fairly self-explanatory. However, in types in which there is a single offender or multiple offenders with multiple victims, the victim count can include the offenders themselves. Situations in which the offender(s) injured or killed other victims and then either attempted or completed suicide would be counted as a single offender or multiple offender type with multiple victims. If a single offender only injured or killed himself in an attempted or successful suicide, the type was coded as a single offender with only suicide. If an incident occurred in which a single victim or multiple victims were injured or killed, but the offender was never apprehended, the type would be coded as unknown offender(s) with a single victim or multiple victims. In the situation in which an offender brought a firearm on school ground and fired it, but did not directly injure or kill anyone, the type would be coded as a single offender

with no victims. This type was included for the few incidents in which an offender was apprehended and charged for a crime such as possessing and firing a weapon on school property.

The variable for *multiple shooters* was coded continuously from one to three in order to provide ease in analysis of the data. If multiple shooters were present in one incident, multiple offender characteristics were recorded for the same incident. The maximum number of offenders for an incident within this data set was three. Although only cases with single offenders were included for final data analysis, the variable was included in order to provide a count for how many cases included one offender or more for potential analysis in the future. In order to simplify this variable for single offender-only analyses, an abbreviated *single offender/victim typology* was produced including only single offender with a single victim, single offender with multiple victims, single offender who only committed suicide, and single offender with no victims.

A count for the *total number of victims injured and killed* was created in order to get a sense of the overall body count for each incident. To be considered a victim of the incident, the victim had to be directly injured or killed by the weapon(s) used by the offender in the incident. Final counts for victims killed were analyzed from later reports to account for deaths that did not occur at the scene of the incident. Those individuals who later died of injuries sustained in the incident were included in the total victims killed count. The subcategories for victims were broken down into students, teachers, staff and administration, officers, non-affiliated individuals, and offenders. School-affiliated victims like students, teachers, and other staff were included due to the higher expected prevalence of these victims overall due to their presence on school grounds. Officers were included as a subtype to include security officers posted on the campus or police officers responding to the event. Non-affiliated individuals are included in a subcategory

that is inclusive for all adults or children victimized in the incident who were not affiliated with the school by any of the previously mentioned subcategories.

To account for situations of attempted or successful suicide by the offender and situations in which the offender was injured or killed by a responding officer or another individual, a subcategory for offenders being injured or killed was included. For clarification of the cause of offender injury or death, a measure of whether the *offender(s) committed suicide* was included. Those offenders who did not commit suicide, but were injured or killed can be assumed to have been injured or killed by another individual. A measure of whether the *offender was killed at the scene* of the incident was included to account for offenders who were injured at the scene of the incident, but did not die until a later date.

The *total number of weapons reported* used in an incident was recorded in order to later obtain an average number of weapons used per incident. A *total number of guns reported* within the incident was recorded to account for those incidents in which multiple guns were used. At least one gun was required to be present for all incidents included in this data set. Therefore, it can be assumed that the minimum number of guns reported and number of total weapons reported is one for all incidents. A measure for *other types of weapons reported* was recorded to include incidents in which knives, bombs, and other weapons were identified as used during the incident.

Geographical and temporal measures were recorded for each incident in order to analyze differences of the offenses over space and time. The *type of community* was measured as urban or rural for each, with the distinction between types being made based on the United States Census Bureau's 2010 Census Urban and Rural Classification and Urban Area Criteria, which indicated that urbanized areas contain a population of 50,000 people or more. Therefore, in

determining the community type for each incident, the reported city name was evaluated for the population reported by the U.S. Census Bureau in 2010 and categorized accordingly. The *type of school* the offense took place in was coded as Pre-K/Elementary school, Middle school, High school, College/University, or other. Schools designated as "other" included vocational schools, alternative schools, and one-room schoolhouses. The *region* of the United States was recorded based on the state breakdown according to regional divisions by the U.S. Census Bureau, including Northeast, Midwest, South, and West. The *state* the offense occurred within was recorded in order to reference geographical differences of incident locations. The *month* the offense occurred within was recorded in order to analyze the cyclical nature of school shooting incidents, in that it is likely that most incidents will occur in months when school is in session within the United States. Finally, the *year* in which the offense took place was recorded in order to account for the prevalence of school shooting incidents each year from 1997 through 2012.

The final set of 4 independent variables was created to assess the *typology characteristics* present in the typology created by Muschert (2007a). The *primary motivation* for the crime is operationalized using the typologies previously listed, in addition to several other more specific motivations that were encountered during the coding process. These included gang activity, accidental, mental illness, suicide, or self-defense. These categories were chosen for their specificity and their defined separation from the three main typologies. A *rampage motivation* indicates that the shooter attacked the campus with the goal of making a statement by shooting as many individuals as possible, and was a member of the school. A *school-related mass shooting motivation* indicates that the shooter attacked the campus with the same goal as a rampage shooter, but was not a member of the school. A *targeted motivation* indicates that the shooter made an attack on campus with the goal of shooting one or a few specific victims.

As the three main typologies are of the most interest in this study, measures of manifested evidence of a rampage shooting, targeted shooting, or mass murder shooting were reported for each incident. This coding scheme allowed a categorization into one or more of the three typologies for those offenders in which a more specific primary motivation was identified, thus allowing for a final comparison of the three main typologies overall. In reference to evidence of more than one typology being possible, an offender may be sorted into both rampage and targeted or mass-murder and targeted, as there is no conflict in the offender type. An incident may start as a targeted ambition, but end as an incident with multiple victims in order to create a message of power. However, an offender may not be both rampage and mass-murder, as the offender types conflict in that rampage shooters are past or current members of the school and mass-murderers are not affiliated with the school.

Research Design

The research design for this study would be considered a content analysis, as this study is interested in how characteristics of school shootings and their perpetrators are presented in the media and how these factors may affect the amount of media coverage an incident will receive. A content analysis requires a research idea to be presented, in this case being school shooting incidents reported in the media. Then, a sampling strategy must be created, recording units must be defined, and categories must be constructed for analysis, which have all been detailed earlier in the methodology of this paper (Pedhazur & Schmelkin, 1991). This method has been used previously in studies involving rare criminal events. Boots and Heide's (2006) study on parricides in the media utilized the content analysis strategy in order to analyze news reports of worldwide parricide cases by searching for cases via online databases. The study at hand uses this design specifically for the rare case of school shooting incidents occurring only within the

United States, but will take into account news sources from all over the world. This method may be limited in terms of discovering all of the variables of interest, as it is dependent on media sources to provide accurate information for each incident, which not all media sources may be inclined to do. The data might not be complete because those school shooting incidents that do not receive much media coverage may not even fully address all of the offender and offense variables of interest. It is also limited in that the information collected is only what is available through the LexisNexis database in which the media reports for each incident are analyzed.

Data Analysis Plan

The utilized database of incidents is relatively large in comparison to relevant research. To the best of my knowledge, this database of exclusively school shooting incidents is one of the largest that has been collected at this time. Therefore, I will report descriptive statistics for all relevant characteristics of the school shooting incidents, including characteristic of the offenders, offenses, and criminal justice processing. Although offender characteristics were recorded on all reported offenders in incidents with multiple offenders, only characteristics for incidents with a single offender were included in the initial data analysis (n=101). Approximately 11% of the overall dataset of incidents had multiple offenders (n = 11) or unknown offenders (n = 5). Accordingly, these cases were removed for the analysis, thus allowing for analysis of approximately 86% of the data set. In order to run these analyses a new data set was created to include single offender incidents only.

In order to accomplish the first three objectives of this study, which included an examination of the correlates of school shootings, subsequent case processing of the offenders, and school shooting typology presented by Muschert (2007a), SPSS was used to calculate frequencies. Frequencies were reported for all 65 variables for offender characteristics, case

processing characteristics, offense characteristics, and media coverage characteristics for each incident within the dataset. The variable for primary motivation, in addition to the three variables pertaining to typology (evidence of rampage, evidence of targeted, and evidence of school-related mass murder) were evaluated based on frequency and related offense and offender variables.

As the fourth objective of this research was to address the possible variation in media coverage of school shooting incidents due to differences in offender characteristics and offense characteristics, variables in each of these characteristic categories that had both sufficient data and variation in the data were chosen for further cross-tabular analyses in order to determine any statistically significant relationship with the dependent variable, total amount of media coverage received. The variation in media coverage provided a range of 6 to 973 articles, with approximately one-third of incidents receiving 600 or more articles of media coverage. This value is similar to the value for the first standard deviation of total media coverage, which is approximately 713 articles. Therefore, the total amount of media coverage received by an incident was dichotomized as *599 or fewer articles* and *600 or more articles* to allow for this analysis.

Chi-squared analyses were used for nominal and ordinal variables. Phi and Cramer's V or Somers'd were used to measure the strength of the associations when significant findings emerged in the cross-tabular analyses. Effect size values of 0.2 were deemed as small, those at 0.5 were evaluated as moderate, and those at 0.8 were considered large (Ferguson, 2009). Effect sizes below 0.2 were considered weak and indicated that a significant relationship lacked meaningfulness and substance. As presented in the results section, variables that yielded a significant relationship with the amount of media coverage an incident received were further

analyzed using binary logistic regression. Variables that retained a significant relationship with the amount of media coverage received at $p < 0.05$ were considered predictive of the amount of media coverage an incident was to receive, in terms of more (*600 or more articles*) or less (*599 or fewer articles*) coverage.

CHAPTER FOUR: RESULTS

Of the four objectives to be accomplished in this study, three were descriptive and the fourth was analytical. The descriptive results for the first three objectives pertaining to offense and offender characteristics and the typology under investigation, in addition to case processing characteristics related to incidents, will be discussed first. Then, the results for the final objective of assessing the effect that the previously descriptively analyzed characteristics may have on the amount of media coverage received by incidents are presented in order of cross-tabular analyses, then regression analysis follows.

Descriptive

Objective 1: Offender and Offense Characteristics

As depicted in Table 3, the revised data set of single offenders indicated that nearly 97% of school shooters were male (See page 44). Approximately 90% of all offenders were 14 years of age or older, with nearly half of all offenders being of high school age, from 14 to 18 years old.

More than 90% of school shooters were white (61%) or black (32%). Approximately 7% of the sample were Asian/Pacific Islander (6%) and American Indian/Alaskan Native (1%). Ninety-percent of offenders were affiliated with the school at which the incident occurred, either as a past or current student or employee, or an affiliation by a friend or relative. Approximately 65% of offenders were students at the school in which the incident took place. Of those offenders

Table 3. Offender Characteristics - Demographics

Variables	Frequencies (%)
Sex (n = 101)	
Male	97 (96.0)
Female	4 (4.0)
Age at Occurrence of Incident (n = 101)	
6 through 10	5 (5.0)
11 through 13	5 (5.0)
14 through 18	49 (48.5)
Over 18	42 (41.6)
Race (n = 82)	
White	50 (61.0)
Black	26 (31.7)
American Indian/Alaskan Native	1 (1.2)
Asian/Pacific Islander	5 (6.1)
School Membership (n = 101)	
Student	66 (65.3)
Employee	7 (6.9)
Past-Student	11 (10.9)
Past-Employee	1 (1.0)
Affiliation by family/friend	6 (5.9)
Non-affiliated	10 (9.9)
Grade Level (n = 46)	
Pre-K/Kindergarten through 5 th	4 (8.7)
6 th through 8 th	10 (21.7)
9 th through 12 th	17 (36.9)
College (Undergraduate or Graduate)	15 (32.6)
Mean (SD)	9th (3.41)
Median	10th
Mode	College undergraduate

in which a grade level was reported, approximately 70% were of high school grade level or above, which is consistent with the distribution of ages of offenders.

As depicted in Table 4, approximately 30% of the 101 offenders had a reported history of mental health issues (See page 45). Of the 23 with diagnoses, mood disorder (e.g. depression,

bipolar), and schizophrenia were the most common. Approximately 8% of the offenders had a reported use of psychotropic medication, mainly anti-depressants.

Twenty of the 101 school shooters exhibited indicators of prior antisocial behavior according to news reports. Approximately 6% of offenders were reported as being abused in their home. In analyzing interviews with the offender’s peers, in only 9% of incidents did media accounts report that peers had prior knowledge of offenders’ intent to commit the crime. Only 3% of offenders were reported as expressing their intent to commit the crime on social media.

Table 4. Offender Characteristics – Medical/Behavioral History

Variables (N = 101)	Frequencies (%)
Reported mental health history	30 (29.7)
Reported diagnosis (n = 23)	
Mood Disorder	13 (56.5)
Schizophrenia	7 (30.4)
Other	3 (12.9)
Reported use of psychotropic medication	8 (7.9)
Reported prior antisocial behavior	20 (19.8)
Reported abused	6 (5.9)
Reported peer knowledge of intent	9 (8.9)
Reported intent on social media	3 (2.9)

As depicted in Table 5, the mean number of victims injured was approximately 2, with students being the most prevalent type of victim injured with a mean of nearly 2 (See page 46). The number of total victims injured in an incident ranged from 0 to 25; the range for students injured in an incident was nearly the same, 0 to 24. The mean number of victims killed was 1.6, with students once again being the most prevalent type of victim injured with a mean of 1.1. The number of total victims killed in an incident ranged from 0 to 33 while the range for students killed in an incident was 0 to 27.

The values for offender being killed at the scene of the incident and offenders committing suicide are consistent in that values for both are 26. Notably, only 25 of the offenders who committed suicide died on the scene of the incident; the single offender killed on the scene who did not commit suicide was killed by responding officers. One offender who attempted to commit suicide did not die of his injuries until he was in the hospital away from the scene.

Table 5. Offense Characteristics – Victims Injured and Killed

Variables (n = 101)	Mean (SD)	Median	Mode	Range
Total Victims Injured or Killed	3.7 (6.7)	2	1	0 to 50
Total Victims Injured	2.0 (3.9)	1	0	0 to 25
Students Injured	1.7 (3.7)	1	0	0 to 24
Teachers Injured	0.1 (0.4)	0	0	0 to 3
Staff/Administration Injured	0.1 (0.3)	0	0	0 to 2
Officers Injured	0.0 (0.1)	0	0	0 to 1
Non-affiliated Individuals Injured	0.1 (0.8)	0	0	0 to 8
Offender(s) Injured	0.0 (0.1)	0	0	0 to 1
Total Victims Killed	1.6 (4.3)	1	0	0 to 33
Students Killed	1.1 (3.5)	0	0	0 to 27
Teachers Killed	0.2 (0.8)	0	0	0 to 5
Staff/Administration Killed	0.1 (0.3)	0	0	0 to 2
Officers Killed	0.0 (0.1)	0	0	0 to 1
Non-affiliated Individuals Killed	0.1 (0.8)	0	0	0 to 8
Offender(s) Killed	0.3 (0.5)	0	0	0 to 1
Offender Committed Suicide - Frequency	26 (25.7%)			
Offender Killed at the Scene - Frequency	26 (25.7%)			

As depicted in Table 6, the mean number of total weapons used in an incident was 1.3 (See page 47). The median or mode is much more representative of the total number of weapons used, as the large majority of cases reported only one weapon. All incidents were required to involve at least one gun. Therefore, it is logical that guns make up the majority of total weapons.

Table 6. Offense Characteristics – Weapons Involved

Variable (n = 101)	Mean (SD)	Median	Mode	Range
Total Number of Weapons Used	1.3 (0.8)	1	1	1 to 5
Number of Guns Reported	1.2 (0.6)	1	1	1 to 4
Number of Knives Reported	0.1 (0.3)	0	0	0 to 2
Number of Bombs Reported	0.0 (0.2)	0	0	0 to 2
Number of Other Weapons Reported	0.0 (0.2)	0	0	0 to 2

As depicted in Table 7, approximately 54% of incidents occurred in urban communities (See page 48). Nearly half of all incidents occurred at a high school, which is consistent with the offender ages previously mentioned. About 42% of incidents occurred in the South, and less than 10% of incidents occurred in the Northeast. Interestingly, the state with the most incidents was California, with 14 incidents of the total 101 incidents occurring within the state. The state with the next highest incident count was Michigan, with 7 incidents occurring within the state. Approximately 82% of incidents occurred within the months that public school is regularly in session, from February through May and from August through November. When comparing the distribution of incidents over the 15-year period, it is notable that more than half (59%) of incidents occurred most recently, from 2008 through 2012.

The presented results for both offender and offense characteristics were, for the most part, consistent with the previously discussed literature. A few variables of significant interest emerged due to unexpected proportions in the displayed frequencies, which will be discussed in the analytical portion of these results, and again in the implications for this study. These variables included school membership, reported mental health history, total victims injured or killed, offender suicide, region of the U.S., month, and year of incident occurrence.

Table 7. Offense Characteristics – Geographical and Temporal

Variable (n = 101)	Frequencies (%)
Type of Community	
Urban	54 (53.5)
Rural	47 (46.5)
Type of School	
Pre-K/Elementary	11 (10.9)
Middle	17 (16.8)
High	44 (43.6)
College/University	23 (22.8)
Other	6 (6.0)
Region of the U.S.	
Northeast	9 (8.9)
Midwest	23 (22.8)
South	42 (41.6)
West	27 (26.7)
Month of Incident Occurrence	
February through May	52 (51.5)
June through July	4 (4.0)
August through November	31 (30.7)
December through January	14 (13.8)
Year of Incident Occurrence	
1997 through 2002	20 (19.8)
2003 through 2007	22 (21.7)
2008 through 2012	59 (58.4)

Objective 2: School Shooting Typology

Table 8 depicts the frequencies for the evidence of different school shooting types, as proposed by Muschert (2007a), in addition to frequencies for primary motivation (See page 49). To refresh, the rampage type consists of an institutional attack, which is committed by member, or former member, of the school, and involves multiple victims. The targeted type is also committed by a member, or former member, of the school, but is motivated by revenge against a specific individual or individuals. A school-related mass murder type is similar to the rampage

Table 8. Typology Assessment

Variables (N = 101)	Frequencies (%)
Primary Motivation for Crime	
Rampage	23 (22.8)
Targeted	46 (45.5)
School-Related Mass Murder	5 (5.0)
Gang activity	4 (4.0)
Accidental	6 (5.9)
Mental illness	2 (2.0)
Suicide	13 (12.9)
Self-defense	2 (2.0)
Evidence of Rampage	26 (25.7)
Evidence of Targeted	65 (64.4)
Evidence of Mass Murder	12 (11.9)

type, in that it has similar motivation behind it and often similar victim-counts, but is perpetrated by a non-member of the school.

In addition to the motivation that drives the three types suggested by Muschert (2007a), primary motivation driven by gang activity, by accident, by mental illness, by suicide, and by self-defense were compared. Most notably of these motivations, more than one-tenth of all incidents included an offender who was purely driven by suicide. Gang activity, as previously discussed, was considered a separate motivation in order to get an accurate proportion of how many school shootings were committed due to this other type of criminal activity. However, less than 5% of incidents were motivated by gang activity.

In order to allow for the most inclusive assessment of Muschert's (2007a) typology, the variables for evidence of each type of school shooting were provided for each incident within the dataset. The most prevalent motivation of which evidence was found was the targeted type, of which 64% of incidents manifested evidence of having. Continuing the assessment of Muschert's

(2007a) typology, 26% of incidents had manifested evidence of a rampage motivation and 12% manifested evidence of a mass murder motivation. The reported frequencies are consistent with Muschert's (2007a) discussion of the typologies, in that rampage and school-related mass murder types are much less frequent than the targeted type.

Objective 3: Case Processing Characteristics

Although case processing characteristics were not available for all incidents within the sample, the presented frequencies warrant some interesting findings, which are displayed in Table 9 (See page 51-52). For those situations in which an arrest was applicable, in that the offender was known and alive, and was reported, 97.3% of offenders (n = 73) were arrested. Almost 90% who proceeded to trial (n = 62) were processed through the criminal justice system as an adult, regardless of their age. The mean number of charges brought up against an offender (n = 67) was approximately 4; the majority of offenders, however, were reported as receiving 1 charge. Of these charges, approximately 50% of offenders were reported as charged with murder (45%) or manslaughter (6%). About 60% were reported either as charged with attempted murder (31%) or with assault (30%). Although all of these cases reported having a gun on a school campus, only about one fifth of offenders were charged specifically with having a weapon on a school campus.

Of the 57 offenders in which a plea was reported, 40% of offenders pled guilty to the charges brought up against them, half of which received a plea deal for a reduction of charges. Another 5% did not dispute their guilt by pleading no contest or accepting an Alford plea. Although 23% of offenders pled not guilty to their charges, only 5% of offenders were found not guilty. Of the 17% of offenders who pled not guilty by reason of insanity (10%) or guilty but

mentally ill (7%), only 4% of offenders were found as such. Overall, 89% of the 56 offenders for whom outcome data were known with were found guilty in some form or another.

Sentencing data were available for 52 convicted offenders. Of these offenders, 85% received some length of prison sentence; 40% of convicted offenders received 50 years to life in prison. Only two offenders were sentenced to juvenile sanctions. In only two cases was the death penalty sought, and in only one case was the death penalty received.

Table 9. Case Processing Characteristics

Variables	Frequencies (%)
Offender Arrested (n = 73)	71 (97.3)
Processed in System (n = 65)	
Juvenile	4 (6.2)
Adult	58 (89.2)
Incompetent to stand trial	3 (4.6)
Number of Charges (n = 67)	
Mean (SD)	4.1 (3.8)
Median	3
Mode	1
Range	1 to 21
Charged with Murder	30 (44.8)
Charged with Manslaughter	4 (6.0)
Charged with Attempted Murder	21 (31.3)
Charged with Assault	20 (29.9)
Charged with Weapon at School	14 (20.9)
Charged with Reckless Endangerment	7 (10.4)
Charged with Felony Weapon	15 (22.4)
Charged with Terrorist Act	2 (3.0)
Plea (n = 57)	
Guilty	23 (40.4)
Not Guilty	13 (22.8)
NGRI	11 (19.3)
GBMI	4 (7.0)
Self-defense	3 (5.3)
Alford Plea	1 (1.8)
No contest	2 (3.5)
Death Penalty sought (n = 57)	2 (3.5)
Conviction (n = 56)	
Guilty	35 (62.5)

Table 9. Case Processing Characteristics (cont.)

Variables	Frequencies (%)
Conviction (cont.)	
Not Guilty	2 (3.6)
NGRI	1 (1.8)
GBMI	1 (1.8)
Charges dropped	3 (5.4)
Plea deal	14 (25.0)
Sentence (n = 52)	
Juvenile sanctions	2 (3.8)
Probation	1 (1.9)
Treatment	2 (3.8)
Jail time	2 (3.8)
Up to 10 years in prison	5 (9.6)
10-25 years in prison	11 (21.2)
26-50 years in prison	7 (13.5)
51 or more years in prison	6 (11.5)
Life with possibility of parole	11 (21.2)
Life without possibility of parole	4 (7.7)
Death penalty	1 (1.9)

The results pertaining to case processing are interesting in how they relate to current literature, in that the potentially harmful framing of juvenile violence, as discussed by Muschert (2007b), is evident in that only a few of the school shooters who were under 18 years of age were retained in juvenile court. As Kappeler and Potter (2005) indicated, cases in which the offender is a juvenile are quite often transferred into the adult court system, where they may receive much harsher sentences than they would in the juvenile justice system. However, it is also notable that the majority of offenders received sentences of 50 years or less time in prison, which can be equated to lesser sentences. This finding potentially conflicts with the statements previously made by Muschert (2007b) and Kappeler and Potter (2005). Implications of these findings are later discussed.

Objective 4: Analysis of Media Coverage

Table 10 demonstrates a breakdown of the total amount of articles received overall. The largest number of major world publications, newspaper articles, magazine articles, wire services, blogs, and news broadcasts for an incident was 973. The mean value for total amount of media coverage was approximately 421. Approximately 43% of incidents received between 200 and 599 stories about the incident, where 13% received less than 100 stories and 17% received more than 800 stories.

Table 10. Media Coverage Characteristics

Variable (n = 101)	Frequencies (%)
Total Amount of Media Coverage	
Less than 100	13 (12.9)
100-199	16 (15.8)
200-399	27 (26.7)
400-599	16 (15.8)
600-799	12 (11.9)
800 or more	17 (16.8)
Mean (SD)	420.9 (291.9)
Median	377
Range	6 to 973

The distribution of the data was used as the basis for the dichotomization of the variable of total amount of media coverage. As those incidents that received the most amount of media coverage were of interest for further analyses, incidents that received what was essentially the top one-third in terms of most amount of media coverage (indicating 600 articles or more) were compared to incidents that received lesser amounts of media (indicating 599 articles or fewer).

Analytical

Recall that the final objective of this study focused on analyzing the potential effect that certain

characteristics of school shooting incidents may have on the total amount of media coverage received. To address this objective and to complete the assessment of the proposed hypotheses for this research, further analyses were completed using cross-tabular analysis and regression analysis.

Cross-tabular Analysis

Of the 65 total independent variables that were descriptively analyzed, 16 had a sufficient number of cases and variation in the distribution of the data to allow for further analyses: 4 offender characteristic variables, 2 case processing variables, 7 offense characteristic variables, and 3 typology characteristic variables. The *four offender characteristics* were age at incident occurrence (n = 101), race (n = 82), school membership (n = 101), and reported mental health history (n = 101). The *two case processing variables* consisted of number of charges (n = 67) and sentence (n = 52). The *seven offense characteristics* included single offender/victim type (n = 101), total victims injured or killed (n = 101), offender killed at the scene (n = 101), type of community (n = 101), type of school (n = 101), region of the U.S. (n = 101), and year of incident occurrence (n = 101). The three typology characteristic variables included evidence of rampage type (n = 101), evidence of targeted type (n = 101), and evidence of school-related mass murder (n = 101). Notably, the data distribution was sufficient to analyze seven of the nine hypotheses tested: race, school membership, mental health history, social media, rampage shooting, school related mass murder, single offender/victim type, and total victims injured or killed. The two hypotheses that could not be tested were gender and social media notification of school shooting intent.

Cross-tabular analysis proceeded with these 16 variables. Six of the variables were significantly correlated with the variable for media coverage: one involved an offender variable,

four involved offense variables, and one involved a typology variable. As discussed below, effect sizes obtained in the cross-tabular analyses were found to be small, in the range of 0.2 to 0.4. In ascending order of association measure strength, these variables included reported mental health history at 0.21, single offender/victim type at 0.29, region of the U.S. at 0.32, total victims injured or killed a 0.33, year of incident occurrence at 0.35, and evidence of school-related mass murder at 0.38. Detailed analyses of these findings follow.

The breakdown of variables for analysis is shown in Figure 1.

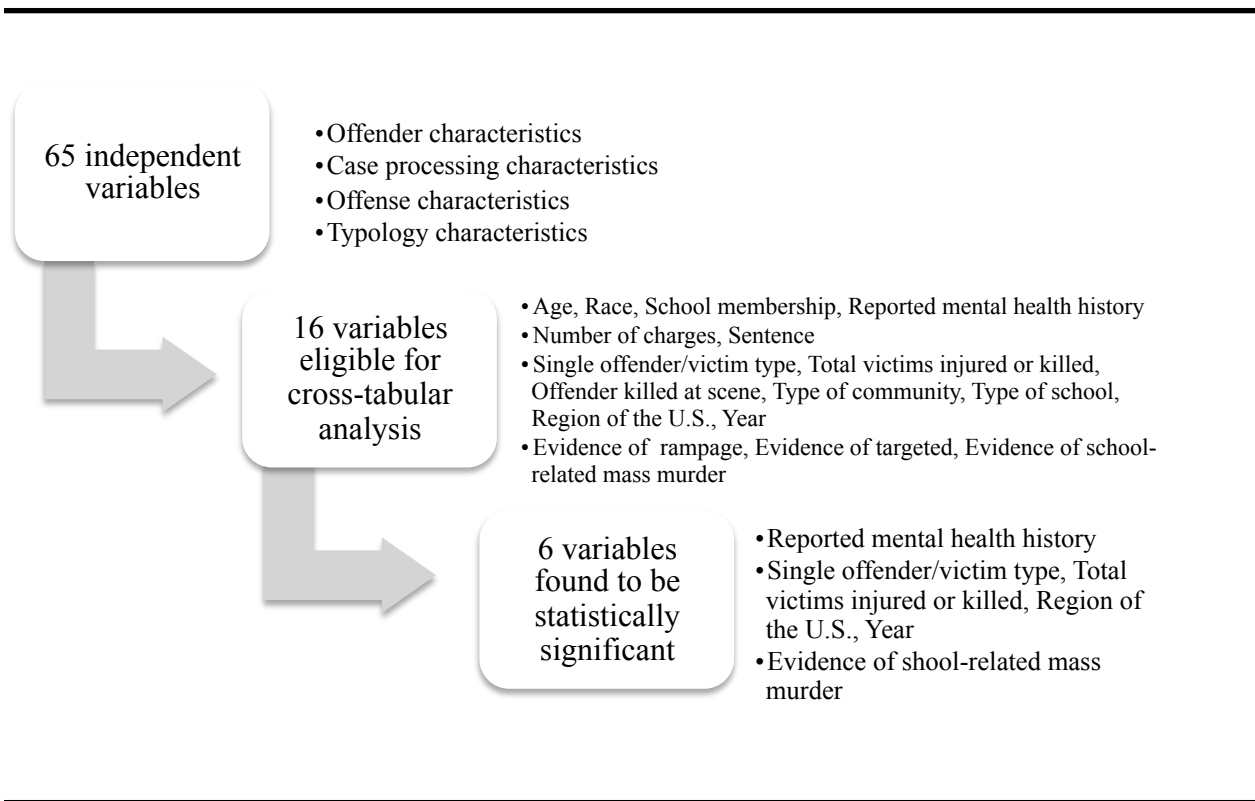


Figure 1. Flowchart of Independent Variables Included in Further Analyses

Of the four offender variables that could be analyzed, one variable yielded statistically significant findings from the cross-tabular analysis: reported mental health history. As shown in Table 11, as predicted, incidents in which the offender reportedly had evidence of a mental

health history were significantly more likely to receive higher amounts of media coverage, indicating 600 or more articles involving the incident, than those incidents in which there was no evidence of a mental health history (43% vs. 23%). Correspondingly, incidents in which the offender had no reported evidence of mental health history were more likely to receive less media coverage than those incidents in which evidence of mental health history was reported (78% vs. 57%).

Table 11. Reported Mental Health History by Total Amount of Media Coverage Received

Variables (N = 101)	Reported mental health history		Total (%)
	Yes (%)	No (%)	
Less than 599 articles	17 (56.7)	55 (77.5)	72 (71.3)
600 or more articles	13 (43.3)	16 (22.5)	29 (28.7)
Total	30 (100)	71 (100)	101 (100)

Note: $\chi^2(1) = 4.457, p < 0.032, \phi = 0.210$

Of the six offense variables analyzed for significance, four variables yielded significant results within the cross-tabular analyses: two of these four pertained to victim characteristics and two to offense characteristics. The two variables pertaining to the victims that had a significant relationship with the total amount of media coverage received pertained to two more of the hypotheses: single offender/victim type and the total number of victims injured or killed. The variable for single offender/victim type was dichotomously coded as one or no victims (including suicide) versus multiple victims, given that those incidents that included multiple victims were of interest. As shown in Table 12, those incidents in which there were multiple victims, as predicted, were more likely to receive 600 or more articles relating to the incident than those incidents in which there was only one victim or no victims (43% vs. 17%).

Table 12. Single Offender/Victim Type by Total Amount of Media Coverage Received

Variables (N = 101)	Single Offender/Victim Type		Total (%)
	One or No Victims (%)	Multiple Victims (%)	
Less than 599 articles	45 (83.3)	27 (57.4)	72 (71.3)
600 or more articles	9 (16.7)	20 (42.6)	29 (28.7)
Total	54 (100)	47 (100)	101 (100)

Note: $\chi^2(1) = 8.227, p < 0.004, \phi = 0.285$

Correspondingly, those incidents in which four or more victims were injured or killed, as predicted, were significantly more likely to receive 600 or more articles of media coverage than those incidents in which there were less than four victims, as is shown in Table 13 (57% vs. 21%).

Table 13 Total Victims Injured or Killed by Total Amount of Media Coverage Received

Variables (N = 101)	Total victims injured or killed		Total (%)
	0 – 3 (%)	4 or more (%)	
Less than 599 articles	62 (79.5)	10 (43.5)	72 (71.3)
600 or more articles	16 (20.5)	13 (56.5)	29 (28.7)
Total	78 (100)	23 (100)	101 (100)

Note: $\chi^2(1) = 11.252, p < 0.001, \phi = 0.334, \text{Somers's } d = 0.360$

Two offense characteristic variables that were statistically significant related to the geographical and temporal characteristics of the crime. The four regions of the United States were dichotomously coded as Northeast and Midwest versus South and West, as the majority of the incidents occurred in the South and West and the minority of incidents occurred in the Northeast and Midwest. As shown in Table 14, incidents that occurred in the Northeast and Midwest were more likely to receive 600 or more articles of media coverage than articles than

incidents that occurred in the South or West regions of the United States (50% vs 19%) (see page 45). Conversely, incidents that occurred in the South and West regions were more likely to receive less than 599 articles than those incidents that occurred in the Northeast and Midwest (81% vs 50%).

Table 14. Region of the U.S. by Total Amount of Media Coverage Received

Variables (N = 101)	Region of the U.S.		Total (%)
	Northeast or Midwest (%)	South or West (%)	
Less than 599 articles	16 (50.0)	56 (81.2)	72 (71.3)
600 or more articles	16 (50.0)	13 (18.8)	29 (28.7)
Total	32 (100)	69 (100)	101 (100)

Note: $\chi^2(1) = 10.370$, $p < 0.002$, $\phi = 0.320$

The year of incident occurrence was initially coded into three categories: 1997 through 2002, 2003 through 2007, and 2008 through 2012. As the category for 2003 through 2007 stood out amongst the other time periods, the variable was dichotomously recoded in order to view the differences in media coverage from the time period of 2003 through 2007 versus the two other periods combined, 1997 through 2002 and 2008 through 2012. As shown in Table 15, incidents that occurred in the time period of 2003 through 2007 were significantly more likely to receive 600 articles or more in media coverage than incidents occurring in the combined time periods from 1997 through 2002 and 2008 through 2012 (59% vs 20%). (See page 59)

Of the three typologies proposed by Muschert (2007a) that were included in coding for the typology independent variables, only those incidents that presented evidence of falling into the school-related mass murder type yielded a significant result, as shown in Table 16 (See page 59). Those incidents of the school-related mass murder type, as predicted, were more likely to

Table 15. Year of Incident Occurrence by Total Amount of Media Coverage Received

Variables (N = 101)	Year of incident occurrence		
	1997–2002 or 2008–2012 (%)	2003–2007 (%)	Total (%)
Less than 599 articles	63 (79.7)	9 (40.9)	72 (71.3)
600 or more articles	16 (20.3)	13 (59.1)	29 (28.7)
Total	79 (100)	22 (100)	101 (100)

Note: $\chi^2(1) = 12.681$, $p < 0.001$, $\phi = 0.354$, Somer's $d = 0.388$

receive at least 600 articles of devoted media coverage than those incidents that did not fall into the school-related mass murder type (75% vs. 23%). Similarly, those incidents that did not fall into the school-related mass murder type were more likely to receive 599 articles or fewer of media coverage than those incidents identified as school-related mass murders (78% vs. 25%).

Table 16. Evidence of School Related Mass Murder by Total Amount of Media Coverage Received

Variables (N = 101)	Evidence of school related mass murder		Total (%)
	Yes (%)	No (%)	
Less than 599 articles	3 (25.0)	69 (77.5)	72 (71.3)
600 or more articles	9 (75.0)	16 (22.5)	29 (28.7)
Total	12 (100)	89 (100)	101 (100)

Note: $\chi^2(1) = 14.254$, $p < 0.001$, $\phi = 0.376$

Regression Analysis

A binary logistic regression analysis was used to further analyze the relationship between the six independent variables that proved to be statistically significant in cross-tabular analyses and the dependent variable of amount of media coverage received. Note that four of the independent variables that were significantly related to the amount of media coverage involved variables for which predictions were made: mental health history, single offender/multiple victim

type, total victim injured or killed, and evidence of school-related mass murder. The amount of media coverage that was received was coded as 0 = *599 or fewer articles* and 1 = *600 or more articles*. In order to simplify the interpretation of the regression, all independent variables were re-coded in the same direction. Variables for reported mental health history and evidence of school-related mass murder were re-coded as 0 = *no* and 1 = *yes*. The variable for single offender/victim type was recoded as 0 = *one/no victims* and 1 = *multiple victims*. The variable for total amount of victims injured or killed was re-coded as 0 = *0–3 victims* and 1 = *4 or more victims*. The variable for region of the United States was re-coded as 0 = *South/West* and 1 = *Northeast/Midwest*. The variable for year was coded as 0 = *1997–2002/2008–2012* and 1 = *2003–2007*. Regression diagnostics (tolerance, variance inflation factor, and Pearson correlation tables) indicated no collinearity between the independent variables.

The results when the 6 variables were entered into the binary logistic regression are presented in Table 17 (See page 61). Three of the six variables remained significant. Only one of these, however, related to the hypotheses. Incidents that presented evidence of a school-related mass murder were 8 times more likely to receive 600 or more articles of media coverage. In addition to the mass murder type, incidents that occurred within the time period of 2003 to 2007 were four times more likely to receive 600 or more articles of media coverage. Finally, incidents that occurred in the Northeast or Midwest regions of the United States were 3.7 times more likely to receive 600 or more articles of media coverage.

Table 17. Logistic Regression Results

Independent Variables	B	SE	Wald	Exp(B)
Mental health history	0.464	0.580	0.640	1.591
School-related mass murder	2.086*	0.850	6.025	8.056
Single Offender/Victim Type	0.107	0.695	0.024	1.113
Total Victims Injured or Killed	1.087	0.750	2.102	2.967
Year of Incident Occurrence	1.428*	0.600	5.674	4.171
Region in the U.S.	1.295*	0.566	5.231	3.650
Constant	-2.567	0.516	24.760	0.077

Note: Omnibus Tests of Model Coefficients— $\chi^2(6) = 34.206, p < 0.001$; $-2 \log \text{likelihood} = 89.905$; Nagelkerke $R^2 = 0.411$ (estimation terminated at iteration number 5 because parameter estimates changed by less than .001.)
* $p < .05$

CHAPTER FIVE: DISCUSSION

The study utilized a novel data set that allowed for the examination of potentially the largest to-date sample of school shooting incidents in the United States from 1997 through 2012. This data set of “Major School Shootings in the United States Since 1997” was compiled by the Brady Campaign to Prevent Gun Violence. Using the Brady Center data set as a springboard, incidents were selected based on inclusion criteria in order to create a sample that was then examined using LexisNexis in order to obtain details on each incident.

Inclusion criteria for this study consisted of the following: shooting must occur on school campus within the United States, shooting must include one offender with at least one firearm reported, shooting must include at least one shot reported fired on the school campus, and shooting must be reported at least twice through one of the news sources provided by LexisNexis. When cases in the data set that did not meet these criteria were excluded, 117 incidents remained. The decision was made to focus on the 101 school shooting incidents involving single offenders in the United States from 1997 through 2012. Although not all incidents of school shootings in this time period might have been captured, those incidents that occurred on a school campus and were reported in the media had a high likelihood of being present in this dataset due to the diligence of the source of the database that was used.

Each incident was analyzed for the total amount of media coverage associated with the incident, which was operationalized by an article count. Details of each school shooting incident were collected and categorized into four categories of independent variables: offender

characteristics, case processing characteristics, offense characteristics, and typology characteristics. These data were used to assess and add to the current profile of school shooting offenders and offenses, in addition to the typology set forth by Glenn Muschert (2007a).

Recall that this study formulated five hypotheses regarding offender characteristics, two hypotheses regarding typology of an incident, two hypotheses regarding offense characteristics, and two hypotheses relating to case processing characteristics. Unfortunately, two hypotheses were unable to be analyzed due to a lack of variation in the collected data. These hypotheses were related to the variables of offender gender and expressed intent on social media or to peers.

The nine hypotheses that were able to be tested were as follows:

H_{0.2}: Offender race will have no effect on media coverage for an incident.

H_{1.2}: Incidents involving a non-white offender will receive more media coverage than incidents involving a white offender.

H_{0.3}: Offender school membership will have no effect on media coverage for an incident.

H_{1.3}: Incidents involving an offender who is not a member of the school will receive more media coverage than incidents involving an offender who is a member of the school.

H_{0.4}: Offender mental health will have no effect on media coverage for an incident.

H_{1.4}: Incidents involving an offender who has a reported history of mental health issues will receive more media coverage than incidents in which an offender has no mental health history.

H_{0.6}: Rampage typology will have no effect on media coverage for an incident.

H_{1.6}: Incidents that fall into the rampage type will receive more media coverage than incidents that do not fall into this type.

H₀₋₇: School related mass murder typology will have no effect on media coverage for an incident.

H₁₋₇: Incidents that fall into the school related mass murder type will receive more media coverage than incidents that do not fall into this type.

H₀₋₈: Victim/offender type will have no effect on media coverage for an incident.

H₁₋₈: Incidents that fall into the single offender/multiple victim type will receive more media coverage than single offender/no victims, suicide, or single victim type.

H₀₋₉: Total number of victims injured or killed will have no effect on media coverage for an incident.

H₁₋₉: Incidents with a higher count for total victims injured or killed will have more media coverage than incidents with lower counts for total victims injured or killed.

The null hypothesis was retained for six of the hypotheses. Variables for *race*

H₀₋₁₀: The majority of offenders will not be processed in the adult criminal justice system.

H₁₋₁₀: The majority of offenders (i.e. more than half) will be processed in the adult criminal justice system.

H₀₋₁₁: The majority of offenders will not receive sentences of more than 50 years in prison or a death sentence.

H₁₋₁₁: The majority of offenders (i.e. more than half) will receive sentences of more than 50 years in prison or a death sentence.

Based on Chi Square analyses, five of the nine null hypotheses were rejected. *Reported mental health history* (Hypothesis 4) yielded a significant relationship with total amount of media coverage in the cross-tabular analysis; accordingly, the null hypothesis for this variable was rejected. Likewise, variables for *single offender/victim type* (Hypothesis 8) and *total number*

of victims injured or killed (Hypothesis 9), significantly related to total amount of media coverage in cross-tabular analyses. Therefore, the null hypotheses for Hypothesis 8 and Hypothesis 9 were also rejected. In addition, the null hypothesis for Hypothesis 7, which posited that incidents of the school-related mass murder type will receive more media coverage than incidents that are not of this type, was rejected. It is notable that Hypothesis 7 was the only hypothesis in which the variable for *evidence of school-related mass murder type* proved to be significant in both cross-tabular analyses and regression analyses. Finally, the null hypothesis was also rejected for Hypothesis 10, which predicted that the majority of offenders would be processed in the adult court system.

The null hypotheses were retained for the remaining four hypotheses. Race (Hypothesis 2), *school membership* (Hypothesis 3), and *evidence of rampage type* (Hypothesis 6) proved to be insignificant in the cross-tabular analyses. Contrary to predictions, media coverage was not significantly greater for non-whites, non-members of the school, and offenders involved in rampage shootings. The null hypothesis was also retained for Hypothesis 11, as the majority of offenders did not receive sentences of more than 50 years in prison or a death sentence.

The three variables that remained significant in the regression analysis for association with media coverage are of particular importance: *evidence of school-related mass murder*, *region of county*, and *time period*. The fact that mass murders were predictive of high media coverage might have been expected, as this type of school shooting event is known to be more sensationalized due to the involvement of an offender that is not affiliated with the school, and the presence of multiple victims. The heightened coverage of incidents that occurred in the Northeast and the Midwest, relative to those in the South and West, was likely due to the rarity of incidents in these regions in this data set.

Interestingly, incidents that occurred in the 2003 through 2007 time period were more likely to receive 600 articles or more of media coverage, relative to both the earlier and later periods. This finding is possibly due to a potential more immediate post-Columbine response to school shooting incidents across the United States during the 2003 through 2007 time period, as the “moral panic” previously mentioned by Stanley Cohen (1972) reached a heightened state in this country. As these school shooting incidents became more frequent, as they did in the last period, 2008-2012, they were possibly less shocking to the public and, therefore, media coverage of these incidents dropped.

Findings from the Current Study In Relation to the Literature

In evaluating the profile of school shooters set forth by previous literature, some results were found to be consistent. As was anticipated due to the high proportions of perpetrators in previous studies, the grand majority of school shooters were white males (Newman, 2004; Schiele, 2001). Nearly half of all incidents occurred at a high school and nearly half of all offenders were of high school age. Frequencies of mental illness and bullying were not as high as was found in previous literature. However, this may be due to the focus of previous literature on case studies of cases specifically identified for characteristics such as mental illness and bullying of the offender. The findings are consistent with the expectations that the age of the offenders would correspond to the school they attend. The majority of incidents also took place during months in which school was normally in session, which was to be expected. Overall, a school shooting incident occurred approximately once every two months in the United States from the period of 1997 through 2012.

In assessing Muschert’s (2007a) suggested typology for school shootings, the data set provided that the majority of offenses were of the Targeted type. This finding is consistent with

the conclusions Muchert presented within this typology. Rampage and School-Related Mass Murder types were explained to be the most sensational incidents, in that these incidents were more frequently reported in the media. This sensationalism was found to be true in the case of School-Related Mass Murders, as incidents with evidence of this typology proved to be the most likely to receive more media attention.

While overall the typology presented by Muschert is sound, it is potentially too vague. Although Muschert attempted to create a more cohesive definition for school shooting incidents in his meta-analysis of school shooting research, an unfortunate obstacle encountered was the lack of inclusiveness for all possible types of school shooting incidents. In coding, incidents were encountered in which the primary motivation of the offender was difficult to fit in to the presented typologies due to reasons of mental illness, suicide, unrelated criminal activity, or accidental gunfire. Essentially, those incidents in which the offender lacked intent to harm another person or in which the setting of a school was simply circumstantial did not easily fit into the provided typology. For this reason, I believe the typology of school shooters should be amended to allow for incidents in which no symbolic significance, power play, or interpersonal dispute is present.

Implications

Due to the size of the sample, these results should be interpreted with caution. In addition, elements of school shootings for this study were compiled from the presentation of information in media reports, not from confirmed, factual information. Therefore, any discussion of prevalent characteristics must be considered from a media-framing standpoint, not as a perspective of actual reality. However, the findings of the present study allow for potential implications in understanding school shooting incidents involving a single offender.

In the interest of prevention of school shootings, it is notable that approximately one-third of the offenders had reports of having a reported history of mental health difficulties. While this proportion of offenders was less than half of the proportion within the study presented by Vossekul et al. (2002), the presence of this high a frequency is still a significant reason for concern. We should also consider that this frequency for mental illness may be a soft figure in relation to the actual number of offenders in which mental illness was present. Some of this information may not have been noticed by the media, or was just not presented within media reports. This finding should be of interest to both parents of school-aged children and school administrators, as this characteristic could potentially be addressed. In addition, one-fifth of offenders showed signs of prior antisocial behavior, which could be noticed by peers, faculty, and family alike. This finding is similar to the proportion reported by Vossekul et al. (2002) in regard to past violent behavior or noticeable interest in violence. Although not an overwhelming majority of offenders within this study, those who meet the criteria for these categories are of interest simply due to the potential to recognize this behavior as a possible prevention tactic. This suggestion for prevention does not indicate that all individuals who are depressed or violent will act out by becoming a school shooting offender, but the combination of multiple risk factors, such as the aforementioned characteristics, is a noticeable reason for concern in school settings.

Also noteworthy was the frequency of offender suicide. Over one-quarter of offenders committed suicide, either as their primary motivation for bringing a gun to school or after injuring others. Moore et al. (2003) suggested that this suicidal action may be a copycat behavior in order to garner a greater amount of media attention, however determining an offender's reasoning for suicide is difficult post-mortem unless the offender explicitly expressed their reasoning before commencing the crime. Whether suicide was part of the offender's plan in

conducting this crime or simply a reaction to the potential for punishment is often unknown, but is potentially of interest when considering prevention for school shootings. This suggestion is not to say that inclinations of suicide are predictors of committing a school shooting. However, it should be in the consideration of school administrators when creating policies and management procedures for those potentially suicidal students that seriously mentally disturbed individuals are on occasion both suicidal and homicidal. School counselors, psychologists, and social workers are often already trained in risk assessment of violence and suicide in youths, but perhaps this training should be expanded to include all staff within schools to allow for higher likelihood of prevention.

The implications regarding mental illness and other potentially noticeable behavioral characteristics of offenders are particularly hard subjects to approach, as any suggestions of potential prevention techniques would present liability issues for school administration. Issues regarding student privacy become a main concern in liability for schools, as a decision must be made which is more important in certain circumstances: student safety, or safety of the school as a whole versus the privacy rights of students. The sharing of information regarding a potentially at-risk student to teachers and staff is considered a breach of privacy for the student, but the potential risk to the safety of the rest of the school and all of its inhabitants is worth considering when evaluating privacy issues.

As the data for this study were compiled from a database constructed by the Brady Campaign to Prevent Gun Violence, we must consider the impact this study may have on gun legislation. Webber (2003) aptly stated that the widespread availability and acceptance of guns in some communities may be a contributing factor to the potential plotting for an incident, as it is much easier to commit a crime when it is easier to obtain a weapon. The differences in state

legislation on gun laws must be considered due to the variance in frequencies between the Southern region of the United States versus other regions. Nearly half of all incidents occurred in the South, where gun legislation is particularly unrestricted. In comparison, less than one-tenth of incidents occurred in the Northeast, where gun legislation is considerably strict in regulations. This geographical difference in legislation is a potential factor in the occurrence of school shooting incidents in regions across the United States.

The results reported for case processing characteristics are notable, in that they seem to indicate that the “superpredator” myth that Muschert (2007b) suggested as brought about by Columbine was still present through the time period of incidents for this data set, which ends in 2012. Juvenile offenders of these school shooting incidents were overwhelmingly tried as adults, as Kappeler and Potter (2005) suggested would occur with the perpetuation of this myth. While all school shooting incidents may not be considered as equally tragic, the occurrence of such an incident is a tragedy to any of the American people that are affected by such incidents. However, the perpetuating fear that each school shooting incident will be “another Columbine” is destructive to the functioning of the juvenile justice system, as it can give potentially unwarranted punishment to less serious offenders. This implication is not suggesting that some school shooting offenders do not deserve punishment. However, not all crimes are equal, and the sensationalizing of crime such as school shootings is proving to have a detrimental effect on the functioning of justice within the U.S. court systems.

Regarding sentencing of offenders, it is notable that more than half of offenders in which sentencing data were available received sentences of 50 years in prison or less, which can be considered fairly lenient compared to a life sentence. This finding may have been the result of the rather broad definition of school shootings used within this study. Were a narrower

definition to be put in place, specifying perhaps only those incidents in which a person other than the offender was injured or killed, the frequencies of sentences might reflect harsher sentences overall.

Consideration of legislation that allows for some leniency with respect to juvenile offenders is also necessary, as indicated by the decisions made by the United States Supreme Court in *Roper v. Simmons* (2005) and *Sullivan v. Florida* (2009), holding respectively, that juveniles may not be sentenced to death and juveniles may not be sentenced to life without parole in non-homicide crimes. In *Miller v. Alabama* (2012), the United States Supreme Court stated that LWOP sentences should be rare, recognizing that juveniles, unlike their adult counterparts, are developmentally immature and have a greater chance of becoming rehabilitated. In that case, the Court mandated that juveniles convicted of murder must be given a sentencing hearing in which factors in mitigation are presented and weighed by the judge.

The sentencing of juvenile offenders is not to be taken lightly, as those that enter the criminal justice system at a young age are more likely to have the opportunity to be released from imprisonment back into society, simply due to their lifespan. With this consideration, I believe it is imperative that rehabilitation and treatment of juvenile offenders are among the highest priorities within the criminal justice system. Although the topic of rehabilitation for offenders as a whole is controversial, the juvenile population is the most vulnerable and potentially the most susceptible to treatment. Therefore, the government and all other funding outlets for maintaining incarceration of offenders within the United States should focus on this potential solution to reduce recidivism for juvenile offenders.

This study concluded that incidents of the school-related mass murder type are significantly more likely to receive more media coverage than other incidents. Accordingly, we

must consider what it is about this type that has news reports being produced at higher frequencies, and what the implications are for sharing details of crimes of this type. To recap, this type is an attack perpetrated by a non-member of the school for some sort of recognition or power. By allowing the offenders of these types of incidents to receive higher amounts of media coverage, we, as a media-consuming society, are allowing these offenders to receive the recognition they desired. In addition, by giving these offenders this desired attention, we are also giving offenders the power to potentially influence others to commit the same crimes in order to receive the same amount of media attention. A recent movement in some social media atmospheres has risen, which argues that we should not allow offenders of such crimes to be idolized by publishing details of them and the crimes they perpetrate. Instead, media attention should focus on supporting the victims of the crimes and providing media attention to aid the communities that have been affected by such crimes. If news media sources would create guidelines to abide by in which they don't publish details of the offenders of these crimes, we may potentially see a decrease in the frequency of school shooting incidents and other crimes.

Limitations

Due to the unique characteristics of the construction of this study, in that a very rare form of crime was being studied through media accounts of each incident, several limitations must be addressed. Not surprisingly, given the limited literature on this rare form of crime, the sample created was rather small. While the database provided by the Brady Campaign to Prevent Gun Violence included 202 total incidents in this time period, the sample for the purposes of this study had to be reduced to 117 incidents. Recall that cases were excluded in incidents in which a gun was not fired, the incident did not occur on a school campus, or the incident was not able to be corroborated through multiple media sources. This reduction of 42%, while unfortunate, was

necessary in order to analyze accurately the incidents of interest in this dataset. The final sample of 101 incidents over a 15-year period, although small in relation to more common forms of crime, is one of the largest to date and was sufficient to add significant findings to the present literature on the topic.

This final sample of this study is also limited due to the exclusion of incidents in which 11 multiple offenders were present or in which the offender was unknown (5 incidents). As previously discussed, only those incidents with a single offender were included for analysis within the results portion of this study. This restriction was made in order to provide a sample in which all characteristics of interest (offender characteristics, case processing characteristics, and offense characteristics) could be easily analyzed for the purposes of this thesis. Since data have been collected on those incidents who were excluded from analyses in this paper, future researchers could use these data for further analysis of those cases that are not strictly single-offender. Alternatively, a qualitative assessment of these 11 incidents could be undertaken in an effort to examine multiple offender school shootings. Comparisons of the correlates of multiple offender school shootings could then be compared to characteristics involving single offenders.

The reliance on news accounts as data provides some limitations to the data collected within this study. Shon and Roberts (2010) aptly detailed the several shortcomings that are encountered when relying on news records in exploring criminal events. Firstly, as a list of incidents is compiled for the time period of interest, it must be noted that the selected incidents are not a randomized sample of all possible incidents within the time period. Due to the selection of only cases that made it into news sources, all cases that were not detailed by news outlets were not included in the sample. Therefore, we automatically exclude an unknown number of cases.

This limitation may be addressed in future studies by using a different source for details about an incident; for example, police reports on the incidents may be of use.

The second limitation addressed by Shon and Roberts (2010) was encountered during the coding process. Although the instrument used for coding may be made as thorough as possible, there is an intrinsic limitation based on what details are reported within news reports. As this paper studied the variance in the amount of media coverage an incident received, it was logical to expect that not all incidents would have all details of interest available within the news reports. Therefore, the information available on certain variables contained in the coding instrument was limited based on the bias of what the news reported for the incident. Information of reported bullying, reported mental health history, and reported antisocial behavior were difficult to discern from news sources, as details of these topics of interest were not consistently reported across news sources. In addition, not all news sources take the time to research and reflect on information that could be identified about an offender, so some incidents that might have been committed by an offender with a history of bullying, mental health disorders, or antisocial tendencies might not be identified as such. This limitation may only be addressed by delving into other sources for data, like the police reports mentioned above.

The bias of news reports was also present in the accuracy of the information presented. Shon and Roberts (2010) noted that news coverage of incidents is not often “objective and value-free,” in that the transmission of information often shows bias by the correspondent in the coverage of certain details of the incident. Consequently, characteristics of the offender, the victims, and of the incident as a whole may be altered by bias in reporting. This limitation was addressed to the extent possible in the coding procedure, as only details that had been reported by at least two corroborating media sources were included in the data.

Directions for Future Research

Two suggestions for future research are evident that could build nicely on the findings of this study: exploration of school shootings internationally and investigation of school shootings that involved multiple offenders. The generalizability of the present findings with respect to school shooting incidents that occur elsewhere is limited. Future studies should be conducted to include other countries, particularly those countries that were often present within the media coverage range for this study. News sources from Canada, Australia, and the United Kingdom were prevalent within the international media coverage for school shootings in the United States. Therefore, it is desirable that future studies be conducted that include school shooting incidents within these countries in order to see to what extent findings in this study are generalizable to international settings. A particularly interesting exploration into international incidents would include assessing the occurrence of incidents in countries with higher gun restriction, and therefore less gun usage. The high level of cultural acceptance of guns within the U.S. has already been mentioned as a potential factor for the occurrence of school shooting incidents. It is possible that this particular form of crime is more prevalent in the U.S. than it is in other, comparable countries.

Little research is currently available about multiple offender school shootings. In this study, as discussed earlier, 11 incidents were excluded from further analysis because they included multiple offenders. Future studies should analyze the characteristics of incidents with multiple offenders in order to assess potential inter-group differences between single-offender incidents and multiple-offender incidents. In order to analyze those incidents with multiple offenders, a coding decision must be made in order to allow for analysis of the “most serious” offender involved in the incident. For example, in an incident in which one 14 year-old and one

16 year-old are involved as offenders of a school shooting incident, the offender who displays more “serious” characteristics would be chosen for coding. If the 14 year-old was a relatively normal student and the 16 year-old displayed a history of mental health issues in addition to familial abuse, the 16 year-old could be chosen as the representative offender for this incident. Future studies should also consider the potential inter-group differences between offenses involving two offenders versus three offenders.

The inclusion of multiple-offender incidents into the body of research devoted to school shootings would help to further assess the potential threshold for media coverage of an incident. Regarding the rarity theory (Pritchard & Hughes, 1997) relating to school shootings, there may be a present, yet undiscovered threshold for media coverage regarding the content of an incident. Perhaps, offender characteristics as a whole are not at all predictive of media coverage in incidents in which the characteristics of the offense itself are shocking enough, for instance, in incidents that involve several child deaths. In order to assess the potential for predictive relationships of media coverage regarding offense characteristics to truly outweigh the offender characteristics, or for offender characteristics to overshadow offense characteristics, research must be conducted to include those incidents with multiple offenders.

One final suggestion for future research relates to the inciting of media coverage for a school shooting incident. One of the limitations for this study indicated that the incidents included within this study are only those incidents that were reported by media sources. There is a potential that several incidents across the United States during the inclusion period from 1997 to 2012 were not included simply because they were not detected by, and subsequently not detailed and distributed by any media sources. A look at factual governmental or criminal records would be interesting to look at in comparison with the current set of incidents to see how

many, if any, incidents occurred that were not reported by the media. Any unreported incidents should be characterized and compared to incidents within the dataset used for this study to see any differentiating characteristics. Any significant variance in characteristics may indicate that the likelihood of an incident being reported by the media is actually a two-step process. The current study measures the potential second step, in that it measures the extent of media coverage related to an incident. The first step would involve the likelihood of getting any news coverage at all, which would be assessed by completing the suggested research. An identification of this potential two-step process would allow for a better understanding of media reporting as it relates to crime and media framing.

ⁱ Ethnicity was unable to be coded due to the coder's inability to discern any characteristics of ethnicity from either text or pictures relating to the incident in the grand majority of cases. Therefore, the variable for ethnicity was dropped early in the coding process.

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APPENDICES

Appendix A: Study Variables and Operationalization

Table A1. Variables and Operationalization

Variable	Operationalization
<i>Dependent Variable</i>	
Total Amount of Media Coverage	Total # of articles and transcripts related to the incident in the two years following the incident
<i>Independent Variables</i>	
<u>Offender Characteristics</u>	
Sex	Male Female
Age at Occurrence of Incident	# in years
Race	White Black American Indian/Alaskan Native Asian/Pacific Islander
School Membership	Student Employee Past-Student Past-Employee Affiliation by family/friend Non-affiliated
Grade	Pre-K/Kindergarten 1 st 2 nd 3 rd 4 th 5 th 6 th 7 th 8 th 9 th 10 th 11 th 12 th College (undergraduate or graduate)

Table A1. Variables and Operationalization (cont.)

Variable	Operationalization
Reported mental health history	Yes No
Reported diagnosis	Depression Anxiety Schizophrenia Bi-polar ADHD Autism Other
Reported use of medication	Yes No
Reported type of medication	Anti-depressant Anti-anxiety Other
Reported prior antisocial behavior	Yes No
Reported prior criminal record	Yes No
Reported bullied	Yes No
Reported abused	Yes No
Reported peer knowledge of intent	Yes No
Reported intent on social media	Yes No
<u>Case Processing Characteristics</u>	
Offender Arrested	Yes No
Processed as Juvenile or Adult	Juvenile Adult

Table A1. Variables and Operationalization (cont.)

Variable	Operationalization
Processed as Juvenile or Adult (cont.)	Incompetent to stand trial
Number of Charges	# of charges
Charged with Murder	Yes No
Charged with Manslaughter	Yes No
Charged with Attempted Murder	Yes No
Charged with Assault	Yes No
Charged with Weapon at School	Yes No
Charged with Reckless Endangerment	Yes No
Charged with Felony Weapon	Yes No
Charged with Terrorist Act	Yes No
Plea	Guilty Not Guilty NGRI GBMI Self-defense Alford Plea No contest
Death Penalty sought	Yes No
Conviction	Guilty Not Guilty NGRI

Table A1. Variables and Operationalization (cont.)

Variable	Operationalization
Conviction (cont.)	GBMI Charges dropped Plea deal
Sentence	Juvenile sanctions Probation Treatment Jail time Up to 10 years in prison 10-25 years in prison 26-50 years in prison 51 or more years in prison Life with possibility of parole Life without possibility of parole Death penalty
<u>Offense Characteristics</u>	
Offender/Victim Type	Single Offender/Single Victim Single Offender/ Multiple Victims Multiple Offenders/Single Victim Multiple Offenders/Multiple Victims Unknown Offender(s)/ Single Victim Unknown Offender(s)/ Multiple Victims Single Offender/Only Suicide Single Offender/No Victims
Single Offender/Victim Type	Single Offender/Single Victim Single Offender/Multiple victims Single Offender/Only Suicide Single Offender/No Victims
Number of Offenders	# of Offenders
Total Victims Injured	Total # of injured individuals
Students Injured	# of students injured
Teachers Injured	# of teachers injured
Staff/Administration Injured	# of staff/administration injured

Table A1. Variables and Operationalization (cont.)

Variable	Operationalization
Officers Injured	# of officers injured
Non-affiliated Individuals Injured	# of non-associated individuals injured
Offender(s) Injured	# of offenders injured
Total Victims Killed	Total # of injured killed
Students Killed	# of students killed
Teachers Killed	# of teachers killed
Staff/Administration Killed	# of staff/administration killed
Officers Killed	# of officers killed
Non-affiliated Individuals Killed	# of non-associated individuals killed
Offender(s) Killed	# of offenders killed
Offender Killed at the Scene	Yes No
Offender Committed Suicide	Yes No
Total Number of Weapons Used	# of weapons used
Number of Guns Reported	# of guns
Number of Knives Reported	# of knives
Number of Bombs Reported	# of bombs
Number of Other Weapons Reported	# of other weapons
Type of Community	Urban Rural
Type of School	Pre-K/Elementary Middle

Table A1. Variables and Operationalization (cont.)

Variable	Operationalization
Type of School (cont.)	High College/University Other
Region of the U.S.	Northeast Midwest South West
State Incident Occurred Within	State
Month of Incident Occurrence	Month
Year of Incident Occurrence	Year
<u>Typology Characteristics</u> Motivation for Crime	Rampage Targeted School-Related Mass Murder Gang activity Accidental Mental illness Suicide Self-defense
Evidence of Rampage	Yes No
Evidence of Targeted	Yes No
Evidence of Mass Murder	Yes No
<u>Other</u> Off-Property Killing Prior to Incident	Yes No
Type of Victim	Family Friend Stranger