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Community Responses to Mass Casualty Events: A Mixed Method Approach

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COMMUNITY RESPONSES TO MASS CASUALTY EVENTS: A MIXED METHOD
APPROACH

by

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M.S. University of Central Florida, 2014

A dissertation submitted in partial fulfillment of the requirements
for the degree of Doctor of Philosophy
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Major Professors: Roger Handberg & Thomas Dolan

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ABSTRACT

This dissertation explores how traits of a mass casualty event and community institutionalization affect how a community demonstrates solidarity after a mass casualty event. A systematic examination of mass casualty events along these lines has not been conducted before.

Theoretically, individual helping behaviors like altruism help explain individual involvement in demonstrations of solidarity while solidarity and resilience help in explaining group behaviors. A typology is proposed that breaks up mass casualty events into four different types: terrorism, criminal, weather and accidents. These types of events make up the majority of non-war mass casualty events. Experimentally a sample of students is used to assess how individuals are likely to respond to mass casualty events by gauging how they would respond using five different types of demonstrations of solidarity. Findings suggest that victim type positively influences demonstrations of solidarity while casualty number and event type are only selectively influential. Two cases (Orlando, FL 2016 and San Bernardino, CA 2015) are used to test three hypotheses that are related to how a community demonstrates solidarity after a mass casualty event. Results indicate that victim type positively influences demonstrations of solidarity, particularly through the specific institutions within vulnerable communities that increased access to demonstrations. Additionally, increased institutionalization within the victim community also positively influences demonstrations of solidarity. Furthermore, results suggest that event specific traits do influence demonstrations of solidarity under certain circumstances. However, more empirical research is needed to examine how individuals respond and the exact processes available to communities that would aid in their recovery from such an event.

I wish to dedicate this project to the victims of mass casualty events and the first responders who deal with the aftermath of such events firsthand. While these events are traumatic and life changing, a new sense of normalcy is achievable where the victims are honored, causes of such events are confronted, and the institutional support is plenty.

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CHAPTER 1: AN INTRODUCTION TO RESPONSES TO MASS CASUALTY EVENTS

Natural and man-made disasters are likely to increase as the 21st century progresses (Rogge 2004). Over the past two decades, the number of events that result in multiple deaths have increased in the United States (Schenk et al. 2014). These events are often referred to as mass casualty events and these incidents can take the form of terrorist or criminal acts, acts of nature or accidents. Though there are some disagreements in the literature, this paper follows the common definition of a mass casualty event as causing at least five deaths (Arnold, Halpern, Tsai & Smithline 2004; Park, Shin, Song, Hong & Kim 2016). Between 2000 and 2016 there were 140 mass casualty events in the United States.¹ Violent criminal acts, such as the 2012 Newton Connecticut shooting that killed 28 people, accounted for 42 events. Terrorist acts, such as the 2012 Boston Bombing that killed 6 people, accounted for only 13 events. Accidents, like the crash of American Airlines Flight 587 in 2001 that caused 265 deaths, account for 49 events. Acts of nature, like Hurricane Katrina in 2005 that killed approximately 1,800 people, account for 36 events.

Mass casualty events not only take lives but also are traumatic for the communities in which they occur. The community is strained following a mass casualty event and people are often dealing with sudden loss. Therefore, victims of these events need help following such a traumatic event to return to normalcy. Some communities respond resiliently with high numbers of demonstrations of solidarity and return to normal quickly. Other communities do not respond resiliently; demonstrations of solidarity are few and the return to normalcy for the victim

¹ Based on an original database created using news sources of mass casualty events. See Appendix A for complete database.

community takes longer. Why do some communities respond resiliently while others do not? What determines the scale of community response to a mass casualty event? Demonstrations of solidarity are common when a mass casualty event occurs, however, there is little empirical research on what influences the scale of the demonstrations. Understanding what influences demonstrations of solidarity following a mass casualty event can assist in building more resilient communities facing the trauma caused by these events.

Most of the research involving mass casualty incidents is from emergency management and focuses on the initial response to the event. However, theories and findings on collective action and solidarity are becoming more important when analyzing community behaviors following a mass casualty event. This growing body of research is important because it helps explain how communities react following a trauma, including which communities demonstrate solidarity. Understanding of what influences demonstrations of solidarity following an event is important as it can affect post event behaviors and policy. For example, communities that are unable to make robust demonstrations of solidarity may need to receive additional financial and institutional support.

Demonstrations of solidarity begin at the individual level and are driven by individuals with a strong desire to participate in helping behaviors. Community institutions play a pivotal role because they transform those individual desires into action by organizing demonstrations and providing an outlet for those altruistic individuals.

This dissertation has five chapters. Chapter 2 is a literature review focused on social solidarity, community resilience and charitable giving. Existing literature on social solidarity and community resilience does not include actual demonstrations of solidarity in their findings.

Literature on altruism and charitable giving is common, however, neither have substantial empirical findings that examine how mass casualty events affect these behaviors. Chapter 3 proposes a theory of individual and community response, and generates four hypotheses:

- ***Hypothesis 1:*** Higher casualty events increase the likelihood of more demonstrations of solidarity.
- ***Hypothesis 2:*** Violent events will result in more demonstrations of solidarity than nonviolent events.
 - ***Hypothesis 2a:*** Terrorist events will cause more demonstrations of solidarity than other event types.
- ***Hypothesis 3:*** Events that harm victims who are perceived as vulnerable will generate more demonstrations of solidarity.
- ***Hypothesis 4:*** Victim communities that have a higher level of institutionalization will have more demonstrations of solidarity following a mass casualty event.
 - ***Hypothesis 4a:*** A strong response from government institution leaders will lead to more demonstrations of solidarity.
 - ***Hypothesis 4b:*** A strong specific institutional response will lead to more demonstrations of solidarity.

This chapter introduces a figure that explains the processes behind demonstrating solidarity after a mass casualty event. It also discusses the intervening role the media has in relaying the facts of an event to the general public. Social capital is also discussed as an unobserved intervening variable. Social capital and institutional trust allow individuals to demonstrate solidarity with the help of institutions.

Chapter 4 tests hypotheses 1-3 using a survey experiment. The sample of UCF students participated in an experiment with vignettes that varied casualty numbers, event type and victim type. After each vignette those surveyed had the option to respond to each event through five different demonstrations of solidarity; social media response, volunteering time, donating blood, donating money or participating in a vigil. Results indicate that demonstrations of solidarity are only selectively influenced by casualty number and weather events influenced demonstrations of solidarity more than other event types. However, results do suggest that a vulnerable victim type will motivate individuals to demonstrate solidarity more than when a nonvulnerable group is targeted.

Chapter 5 tests the first, third and fourth hypotheses using a case study design based on the cases of the Pulse night club terrorist attack in Orlando, Florida in the Summer of 2016 and the San Bernardino, California terrorist attack in the Winter of 2015. Case selection does not meet most similar criteria; each variable is analyzed independently within each case to show variable influence. In addition to primary and secondary source material, interviews were conducted with local community leaders to better articulate and understand the demonstrations of solidarity that followed each mass casualty event. Findings suggest that when vulnerable victim groups are targeted in a mass casualty event, higher demonstrations of solidarity do indeed follow. Findings also suggest that greater institutionalization within the victim group increases demonstrations of solidarity.

Chapter 6 presents the findings and provides suggestions for future empirical research. Overall, results suggest that multiple community and event related factors can influence demonstrations of solidarity. Understanding what influences demonstrations of solidarity is an

important step in understanding resiliency to mass casualty events. Future experimental research would benefit from adding more variation in casualty numbers when testing their effects upon demonstrations of solidarity. Additionally, future experimental research would also benefit from including other event specific factors (like familiarization) when testing event type effects upon demonstrations of solidarity. Future qualitative research would benefit from increasing the number of cases and from implementing a most similar design so the inferences made would be stronger. Additionally, it is suggested that future research examine general community behaviors like crime rates (not just demonstrations of solidarity) following a mass casualty event and the use of quantitative methods.

Mass Casualty Events, Community & Government Response & Demonstrations of Solidarity

In order to understand the research questions, it is important to introduce several important concepts and factors that will aid in putting this dissertation and its results into proper context. Mass casualty events are often defined in emergency response literature as “any event in which emergency medical services and resources are overwhelmed by the number and severity of casualties” (Mistovich 2013). Many jurisdictions define a mass casualty event based on a relatively small numerical threshold (5 in New York City, 6 in South Korea etc.) (Arnold, Halpern, Tsai & Smithline 2004; Park, Shin, Song, Hong & Kim 2016). For the purpose of this dissertation, events that resulted in five or more deaths from a single cause were considered to be mass casualty events. Five deaths from a single source often cause an overwhelming of medical services seen in other definitions as opposed to simply relying on a high count. Additionally, five deaths from a single source are also likely to receive increased media coverage. This coverage

then informs the rest of the community the facts of the event and thus enables individuals to demonstrate solidarity with the victims.

Mass casualty events are often a collective trauma in that they can impact an entire community not only those immediately affected. They elicit an emotional response amongst people who are not directly involved with the killings. Collective trauma refers to the psychological reactions to a major event that can affect an entire society (Hirschberger 2018). It will be a collective trauma because it is believed that these sudden deaths will cause a community to react with a surge of behaviors to help the victims and the community.

Community is often defined as groups of individuals who share an origin, culture, history, laws, values, and geographic proximity, however, there may be considerable diversity amongst a community (Pfefferbaum et al. 2007). Though proximity to a traumatic event has been shown to increase solidarity, community is not bound strictly in geographic terms (Brenner et al. 2015). Communities reflect beliefs, perceptions and attitudes that potentially influence behavior. Interaction between members is crucial because without it, values and norms cannot be shared, which gives a community its identity. People are not bound to a single community and communities often exist within one another. Communities nest within each other and coexist side by side. However, certain sections of a community are often aligned alongside different identity traits such as ethnicity or religion. These nested communities may respond more strongly to certain stimuli, such as the sudden death of many of their members and that specific nested community may demonstrate solidarity strongly. That proximity, and sense of community allows for a collective effervescence like response to occur following a mass casualty event, resulting in demonstrations of solidarity (Durkheim 1912).

A strong local government response allows for a community that had just been subjected to a mass casualty event to stabilize and demonstrations of solidarity to begin. It is the primary responsibility of the local government to respond and prepare to all phases of emergency management for these events, regardless of specific type. Local governments are also tasked by the community to organize and participate in demonstrations of solidarity. If additional resources are needed, then the local government will go through five steps: (1) declare a local state of emergency, (2) activate mutual aid with other agencies, activate emergency operations center and/or emergency operations plans, (3) coordinate response with public and private organizations and (4) notify state emergency management (NAEMT 2017).² Following that declaration, the state government can then declare a state of emergency and request federal aid via the Federal Emergency Management Agency (FEMA). The Governor of a state can then make a request to the President and an emergency declaration can be made if it is needed to save lives, protect property, safeguard public health or to lessen or avert the threat of a catastrophe (NAEMT 2017). The most serious of disasters can be declared Major Disasters and the response and recovery efforts to such events can provide more federal assistance. Subsequent involvement of other government institutions, either through mutual aid or through an emergency declaration, can affect demonstrations of solidarity greatly. The addition of these other institutions can take some of the burden off the local government institutions allowing demonstrations to occur, or they may bring in their own apparatuses to demonstrate solidarity. Relief provided by additional government institutions allows for local institutions to prioritize demonstrations of solidarity.

² The National Incident Management System (NIMS) drives disaster response in the U.S. and other areas and it has been empirically suggested that these principles aid in alleviating many issues that arise when local institutions respond to large scale events (El Sayed 2013; Dal Ponte et al. 2015).

Demonstrations of solidarity are acts or behaviors that individuals and communities engage in. They take place following traumatic events or other scenarios such as the death of a public figure or polarizing events, etc. Some demonstrations are actual, meaningful behaviors, while others are symbolic with little or no actual impact. For example, demonstrations like donating money, blood or volunteering time occur at the cost of the donor. Other demonstrations, like social media responses, do not occur at the cost of the donor and are more symbolic in nature. These behaviors often take place following a mass casualty event and are the dependent variable in this dissertation.

CHAPTER 2: DURKHEIM, RESILIENCE, SOLIDARITY & INDIVIDUAL GIVING BEHAVIORS

In AD 79, Roman Emperor Titus used the imperial treasury to aid the victims of the Mount Vesuvius eruption in what could be one of the first official demonstrations of solidarity (Higgins 2009). Informal methods of collectively demonstrating solidarity with the victims of a traumatic event likely go back to when communities first formed and humans began helping one another when in need. The French Sociologist Emile Durkheim defined solidarity as a “bond of unity between individuals, united around a common goal or against a common enemy” (Durkheim 1893). Durkheim further described solidarity as the “totality of bonds that bind us to one another and to society, which shape the mass of individuals into a cohesive aggregate” (Durkheim 1984).

Understanding how communities respond to mass casualty events is the first step in understanding which communities participate in demonstrations of solidarity and which communities do not. My analysis of the literature highlights important findings regarding demonstrations of solidarity and is split into two sections. The first section is focused primarily on the ideas and work of Emile Durkheim, which include community effervescence and resilience, social solidarity and group behaviors. The second section is focused on individual behaviors and covers generally charitable giving behaviors, altruism and social capital.

There are two major limitations in the existing literature. First, while individual giving behavior has been systematically examined, only very rarely has it been examined as a demonstration of solidarity to a mass casualty event. A traumatic event, such as a mass casualty event, is likely to affect existing giving behaviors at the individual level but the effect of such

events has not been empirically researched. Prior findings regarding charitable giving would be applicable to understanding demonstrations of solidarity as the same individual processes would motivate people to give. Second, community level demonstrations of solidarity following a mass casualty event have not been examined. Existing literature regarding group behaviors following a mass casualty event is limited and does not explain how event specific traits could influence community response.

Group Behaviors, Community Effervescence & Social Solidarity

In 1912, Emile Durkheim described how a community may come together to communicate the same thought and participate in the same action (Durkheim 1912). This became known as collective effervescence and it can be easily applied to describe how a community may come together following a mass casualty event in order to demonstrate solidarity. Collective action is driven by an individual emotional response which drives people to participate in similar actions. Collective emotions after a disaster are associated with higher solidarity (Garcia and Rime 2019). Participating in demonstrations of solidarity reinforces both positive social beliefs or shared positive beliefs regarding the group (Rime 2005). These demonstrations act as motivators of commitment with values and beliefs. Participation in these demonstrations helps to emphasize the positive aspects of collective experience following a trauma. Additionally, participation in these community wide events has been shown to enhance social identity (Neville and Reicher 2011), ethnic identification (Gasparre, Bosco and Bellelli 2010) and identity fusion³ (Swann et al. 2012). Participation in collective emotional gatherings has also been shown to

³ Identity fusion is a “sense of oneness with a group and its individual members that motivates personally, costly, pro-group behaviors” (Swann and Buhrmester 2012).

increase social cohesion and social integration (Weiss and Richards 1997) and perceived social support (Paez et al. 2007). Collective effervescence is visible in communities following a mass casualty event in the group demonstrations (vigils, gatherings, funds gathered etc.) that often follow, often to express solidarity with the victims.

Durkheim (1893) noted that “heinous crimes shock our collective conscience and elicit a communal response because of the collective nature of the sentiments the crimes cause” while also noting that “crime brings together upright consciences and concentrates them.” Conflict, natural disasters, terrorism and school shootings have been found to produce solidarity, however, how conflict is produced is elusive (Simmell 1955; Coser 1957; Barton 1969; Collins 2004; Drabek 1986; Fritz 1961; Hawdon, Ryan and Agnich 2010; Hawdon and Ryan 2011; Turkel 2002). Vuori et al. (2013) tested Durkheim’s notion of crime leading to collective indignation and examined how particularly heinous crimes can lead to a decline in social order or a promotion of social cohesion. Their results indicated that both models may be applicable. Factors like how an event is framed, the size and experiences of the community limit the generalizability of both models.

Capriano (2006) described solidarity as the degree of trust, sense of familiarity, and bonding relations between individuals and the collectivity. Social solidarity is an aspect of human association that emphasizes the cohesive social bond that holds a group together (Gilson 2003). Individuals have different motives for participating in demonstrations of solidarity. Motives for participating in social solidarity include rational choice, self-interest, shared norms and beliefs. Using a sample of Virginia Tech students, Hawdon, Ryan and Agnich (2009) found that feelings of solidarity increased for six months following the 2007 on campus shooting that

cost 30 lives before decreasing back to normal levels. Collins (2004), looking primarily at terrorism, further specified that group solidarity following a conflict exists in four phases: (1) an initial few days of shock and idiosyncratic individual reaction to attack; (2) one to two weeks of establishing standardized displays of solidarity symbols; (3) two to three months of high solidarity plateau; and (4) gradual decline toward normalcy in six to nine months. Brenner et al. (2015) found that proximity to a traumatic event increased likelihood of participation in demonstrations of solidarity. Sweet (1998) found that solidarity also increased following a natural disaster, however, within a month it returned to pre-disaster levels. Hawdon and Ryan (2011) elaborated on their initial study by using longitudinal data and found that event-specific parochial and public activities generate solidarity but general parochial activities (such as attending local meetings and businesses) are needed to sustain solidarity. Rasanen (2014) found that social solidarity can assist in reducing the worry associated with potential risks and provide a sense of security, however, benefits are limited.

Social solidarity and collective action are often enhanced by individual trust, reciprocity and altruism (Woolcock and Narayan 2000). Social altruism deals with community wide helping behaviors where individual altruism deals with individual desires to participate in helping behaviors. Social altruism has been defined as “the community’s commitment to provide essential resources in order to help and protect their members” (Chamlin and Cochran 1997). Like community effervescence, social solidarity describes group behavior, in this case the community in which a mass casualty event occurred. However, the main difference is that social solidarity describes general solidarity feelings whereas collective effervescence describes a specific collective action.

Community Resilience & Demonstrations of Solidarity

Solidarity is part of being resilient because it helps a community address and overcome a trauma. Community resilience describes the collective ability of a geographically defined area to deal with stressors and efficiently return to normalization of daily life following a shock (Aldrich 2012). Community resilience is founded in the ability of community members to take meaningful, deliberate, collective action to remedy the effect of a problem, including the ability to interpret the environment, intervene, and move on (Pfefferbaum et al. 2007). Resilient communities demonstrate solidarity following a traumatic event like a mass casualty event.

Mass casualty events are traumatic events that strain a community's sense of wellbeing due to the shock and sudden loss of life. Resilience itself is the ability to execute efficient and effective adjustment processes to alleviate stress and restore balance in the face of trauma, tragedy or threat (Steinberg and Ritzmann 1990). For a community to be effectively resilient, members need to cope individually and assist other members of the community to cope with the situation. Community resilience fortifies a community against a variety of social concerns and prepares individuals for future hardship (Brown and Kulig, 1996-1997; Kulig 2000). Many disciplines, such as emergency management, sociology and psychology are slowly acknowledging the concept of community resilience as a preparedness strategy for mass casualty events and as a mechanism to prevent damaging psychological, psychosomatic, and social consequences associated with terrorism and other disasters (Friedman 2005).

Community resilience has grown into a central concept within crisis management policymaking and its effects are evident within national governments (COAG 2009; CCS 2011; USDHS 2011), humanitarian organizations (UNISDR 2007; USAID 2012), and across cross-

institutional crisis management forums (Bach et al. 2010). However, solid empirical findings supporting the concepts behind community resilience are lacking. Community resilience theories were empirically tested in Queensland, Australia following a series of floods in 2010-2011 (George and Stark 2016; McCrea, Walton and Leonard 2016; Madsen and O'Mullan 2016). These publications found that a general well-being of the community (prior to the events) contributed greatly to overall resiliency (McCrea, Walton and Leonard 2016), that a strong community was formed due to the crisis (George and Stark 2016) and social capital, connectedness, and optimism are all important features of a resilient community (Madsen and O'Mullan 2016).

Resilient communities demonstrate solidarity following a mass casualty event. Communities can become resilient in two ways. First is through prior exposure to traumatic events. The communities that learn from and persevere through earlier traumatic events become more resilient as they continue on. As other traumatic events occur, these resilient communities are prepared for them and respond with meaningful demonstrations of solidarity. However, communities where disasters or traumatic events have become commonplace may not respond with high demonstrations of solidarity as the community will have become more accustomed to them occurring. Return to normalization would be quick for them and they may not appear to respond resiliently as demonstrations of solidarity would not be as high. However, return to normalization is the ultimate goal for a community following a mass casualty event and a quick return to normalization would be a sign of a resilient community. Second, is through training and preparation for traumatic events. Communities can prematurely increase their resilience by preparing for different traumatic events that may afflict them. Resilience training includes

educating people as to the role their institutions play and the methods of demonstrating solidarity available after traumatic events. Non-resilient communities will have lesser demonstrations of solidarity and return to normalization would take longer.

When Demonstrations Do Not Occur

Actual demonstrations of solidarity that follow a mass casualty event occur at varying levels. In some communities, demonstrations occur at minimal levels while other communities demonstrate strongly. Prominent mass casualty events, like 9/11 or Hurricane Katrina, commonly raise millions of dollars, receive consistent media coverage and people consistently demonstrate solidarity for these events well after normalcy has returned. Other mass casualty events have very little or no demonstrations of solidarity at all. The majority of the 140 events that occurred in the U.S. from 2000-2016 have no or minimal demonstrations recorded.⁴ When demonstrations of solidarity are lacking or nonexistent it is often for three reasons. First, individual interest in an event is lacking. Lack of interest may occur for a variety of reasons including a low victim count, unknown victim group, blame for the victims, lack of awareness, etc. Second, traumatic events may become too common during a timeframe. Trauma fatigue involves a “numbness” to traumatic events, and if trauma becomes too common then individuals would not respond to an event at all. Third, institutional support may be lacking around certain mass casualty events. Without effective institutions to channel those interested in demonstrating into actual, meaningful behaviors, then demonstrations would be low.

⁴ Based on an original database created using news sources of mass casualty events. See Appendix A for complete database.

In 1965, Mancur Olson suggested that “rational, self-interested individuals will not act to achieve their common or group interests” (Olson 1965 P.2). This phenomenon became known as the free rider problem and it is applied to many analyses of collective action. Existing literature suggests that free riding is common following a disaster (Walsh and Warland 1983; Collins 2004). In the context of this dissertation, free riding would occur when individuals do not demonstrate or only demonstrate minimally but still reap the social benefits. As Olson suggested, self-interest has been found to be the biggest driver of free riding following a disaster (Walsh and Warland 1983). However, communication failures by groups that organize demonstrations of solidarity also significantly increased free riding (Walsh and Warland 1983). Individuals with little motivation or who may desire to participate in demonstrations of solidarity but may only have limited means may respond “slacktively” (Phan 2001).

Slacktivist demonstrations include simple forms of showing solidarity with a cause that require minimal effort, have minimal effects, and require minimal coordination with others. The internet and social media play an important part in aiding the slacktivist mentality. For example, the most often used example of slacktivism is posting a message or picture on social media showing solidarity with the victims. These messages are simple demonstrations of solidarity but do not benefit the victims or community in a concrete way.

A multitude of factors can influence a community into responding with low levels of demonstrations of solidarity. For example, a lack of altruistic individuals would increase levels of free riding. A lack of community institutions that enable actual demonstrations to occur would increase slacktivist responses. Communities that do not respond with high levels of demonstrations of solidarity are less-resilient. Additionally, communities that demonstrate

solidarity strongly or return to normalization quickly while meeting all community needs would be considered resilient.

Demonstrations of Solidarity & Individual Giving Behaviors

In 2017, Americans donated just over \$410 billion to charity (Giving USA 2018). Many recipients of these charitable acts are influenced by world events. For example, \$2.4 billion were donated to the victims of the September 11th terrorist attack and \$3.3 billion were raised for Hurricane Katrina disaster relief (Brown and Minty 2008). Demonstrations of solidarity like these are one of the dependent variables throughout this dissertation.⁵

Understanding who participates in charitable behavior has been thoroughly examined. However, why people demonstrate solidarity and what motives people into demonstrating solidarity has not been examined. Two factors that influence charitable giving are altruism and social capital. Altruism is defined as the belief in or practiced disinterested and selfless concern for the well-being of others (Taylor 2010). Social capital is an idea that is closely related to solidarity (Bell 2010). Trust and existing social networks are two key components of social capital. Access to social networks directly increases volunteering and charitable giving indirectly (Musick and Wilson 2008; Burr et al. 2005; Lee and Brudney 2012; Schervish and Havens 1997). Coleman (1988) proposed that the more dense and diverse social networks are along with how trusting a person is are likely to influence how involved someone is in solidarity action.

⁵This kind of charitable giving is viewed as different from philanthropy by scholars. Charity in general is associated with a strong, short and emotional response whereas philanthropy is seen as involving a long-term effort (Ruesga 2006) Though philanthropy and charity have a considerable overlap the main difference is that charity aims to relieve the pain of a specific problem and is often motivated by specific events whereas philanthropy seeks to solve a root issue (Ruesga 2006; Dietlin 2011).

Who Demonstrates Solidarity?

Scholars have identified several individual factors that explain who demonstrates solidarity. Demographically, older people are much less likely to physically volunteer than younger people (O'Brien and Mileti 1992; Kaniasty and Norris 1995; Haines, Hurlbert, and Beggs 1996; Bjaklebring et al. 2016). Economically, higher status and more income facilitates demonstrations of solidarity, particularly financial demonstrations (Nelson 1973; Nelson and Dynes 1976; Kaniasty and Norris 1995; Bracha and Vesterlund 2013). Previous findings indicate that women were more likely to participate in demonstrations of solidarity (Helms and McKenzie 2013; Mesch et al. 2006; Andreoni and Vesterlund 2001). Religiously affiliated individuals give more than non-religious individuals, particularly when the cause is religious in nature (Wang and Graddy 2008; Sibley and Bulbulia 2014; Hagood 2016). Higher income status has also been found to directly affect giving behaviors, both amount and frequency (Bracha and Vesterlund 2013). Many findings do not consider how traumatic events may impact donation behavior. An emotional element is necessary for donating to charity and demonstrating solidarity following a mass casualty event. However, why people demonstrate and how mass casualty events affect demonstrations has not.

Individual Motivations to Demonstrate

Charitable giving is driven by eight mechanisms; awareness of need, solicitation, costs and benefits of giving, altruism, reputation, psychological benefits, values and efficacy (Bekkers and Wiepking 2011). Of those eight mechanisms awareness of need and altruism are the most important to this dissertation. Following a mass casualty event, the needs of the victim

community would be paramount and awareness of those needs, along with individual altruism would drive demonstrations of solidarity. Sympathy and empathy, guilt, happiness and identity have all been found to influence individuals into giving (Rick, Cryder and Loewenstein 2007; Cialdini, Baumann and Kenrick 1981; Liu and Aaker 2008). These feelings can all influence demonstrations of solidarity after a mass casualty event. For example, an individual who feels pity (sympathy) or understands the feelings (empathy) of the direct victims of a mass casualty event could feel compelled to demonstrate solidarity.

Public donations, such as donating blood and volunteering time, to relief operations can be considered a pro-social behavior (Penner et al. 2005). Relatively, Lee and Chang (2007) found that intrinsic factors like individual altruism led people to donate while specific factors like educational attainment and income were correlated with higher monetary donation amounts. Donating previously to a relief campaign had been found to be a predictor of future donation to a relief campaign (Cheung and Chan 2000). In a comparison of donation types, Lee, Piliavin and Call (1999) found that personal norms and role identity affect the giving of time, money and blood. Lee, Piliavin and Call (1999) further established that charitable donations and formal volunteering are closely related but were unable to establish a relationship between these types of giving and donating blood.

Altruism

Individual altruism deals with individual helping behaviors while social altruism is focused on community wide helping behaviors. Disasters positively influence altruism by increasing donations of material aid and decreasing antisocial behaviors (Mileti et al. 1975; Drabek 1986; Siegel et al. 1999). People have been found to engage in altruistic helping

behaviors, putting themselves at risk to save the lives of others (Tierney et al. 2001). An endogenous relationship appears to exist between acts of altruism and positive feelings. For example, happy people have been empirically shown to participate in charitable behavior more than their unhappy counterparts (Isen and Levin 1972; Aderman 1972). However, altruistic acts, such as gift giving and charitable donations, have also been shown to promote happiness (Anik et al. 2009). Feelings of competence have been shown to increase helping and volunteering behaviors (Harris and Huang 1973; Kazdin and Bryan 1971).

Barton (1969) proposed that altruistic feelings within a community afflicted by a traumatic event may carry on for months after the event. However, other empirical work has found that a therapeutic, helping community is not enduring (Quarantelli and Dynes 1977). High altruistic behavior was associated with blood donation frequency, though convenience, community safety and personal benefit were also found to be correlated with blood donations (Steele et al. 2008). People who desire to participate in demonstrations but have limited abilities to do so would likely be directed towards symbolic acts that have little importance. Prior empirical work examining who is altruistic and participates in donations can be applied to this dissertation. The same individuals who have donated before or possess altruistic traits would likely be the ones who demonstrate solidarity after a mass casualty event.

Social Capital, Social Networks and Demonstrations of Solidarity

Social capital has been defined as “social networks and the associated norms of reciprocity and trustworthiness” (Putnam 2007). Individual level social capital in producing demonstrations of solidarity has already been well established (Bekkers 2012; Brooks 2005; Brown & Ferris 2007; Forbes & Zampelli 2014; Jones 2006; Wang & Graddy 2008; Wilson &

Musick 1997). Social capital is an important part of understanding the inner workings of a community as it related to inter-community relationships. Without the trust and inter-personal networks that comes with high social capital, a community would be disjointed and less likely to respond to a mass casualty event effectively.

Patulny, Siminski and Mendolia (2015) suggested that the emotional and shared experience of participating in symbolic interaction rituals (such as those following a mass casualty event) may affect social capital in that it may bond participants to one another. In a distressed community social capital sustains problem solving abilities while also linking individuals to the broader society and other problem-solving efforts (Bendik 1993). Musick and Wilson (2008) found that individuals who have access to larger social networks volunteer more. Larger social networks are likely to increase informal volunteering (Haines et al. 1996; Kaniasty and Norris 1995; Burr et al. 2005; Lee and Brudney 2012) while also drawing people into charitable giving through information and requests (Schervish and Havens 1997).

As social media usage has increased, social networks have transformed and utilize cyberspace in order to operate. Social media can provide information to a large number of people very quickly, which is beneficial during an emergency situation when traditional communication methods may be overwhelmed. Institutions and organizations are now using the online platform to reach citizens and to aid in collective action and guide people away from these symbolic demonstrations into more actual ones (Obar, Zube and Lampe 2012). The ease of access many people now have to the internet and social media has also aided in collective actions (such as demonstrations of solidarity) as it has increased networking amongst people while simultaneously keeping people in touch with organizations and institutions within their

communities (Obar, Zube and Lampe 2012). The creation of online donation relief funds after a mass casualty event have become commonplace. These online fundraising efforts make it easy and convenient for individuals to demonstrate solidarity with the victims. While social media responses may have minimal effects, they are still demonstrations of solidarity because they are acts that show personal solidarity with the victims of an event.

Conclusion

In conclusion, demonstrations of solidarity and their causes need to be examined at both the individual and group level. Prior findings on group behaviors indicate that solidarity and resilience selectively occur following a traumatic event. Demonstrations of solidarity are indicative of a resilient community; however, resilient communities do not always demonstrate solidarity. Prior findings on individual giving behaviors indicate that people donate for a variety of reasons. Additionally, altruism, social capital and access to social networks are strong predictors of individual giving behaviors. These individual measures of giving behavior are likely to indicate participation in demonstrations of solidarity.

Demonstrations of solidarity are made up primarily of individual giving behaviors that occur following an event that show support with the victims. Individual giving behaviors have been examined as a demonstration of solidarity. However, how do event specific traits affect individuals and their giving behaviors. For example, does the number of people killed during an event influence individual donation behavior? If specific groups are targeted, how does the perception of the victims affect demonstrations of solidarity? The empirical research within this dissertation attempts to answer each of these questions.

Understanding solidarity and resilience and the conditions in which they occur helps explain how a mass casualty event could affect a community. However, prior work does not effectively analyze demonstrations of solidarity as a sign of resilience. Additionally, the trauma of a mass casualty event upon a community has not been examined, particularly along event trait lines. Do certain types of the mass casualty events affect communities differently than others?

CHAPTER 3: ELEMENTS OF SOLIDARITY

The facts of an event are what motivates people and institutions to participate in demonstrations of solidarity following a mass casualty event. This theory is rooted in the notion that event specific traits (such as casualty number, event type, victim type) will motivate people to demonstrate solidarity. All altruistic people will not demonstrate solidarity following a mass casualty event. Additionally, some people with minimal altruistic traits will be motivated to demonstrate solidarity. However, individuals with altruistic traits are more likely to demonstrate solidarity, either individually or through a community level organization following a mass casualty event. Without institutions and willingness of the community to participate in actual helping behaviors, demonstrations of solidarity would likely be lessened. Figure 1 provides a visual representation of how a mass casualty event can influence demonstrations of solidarity.

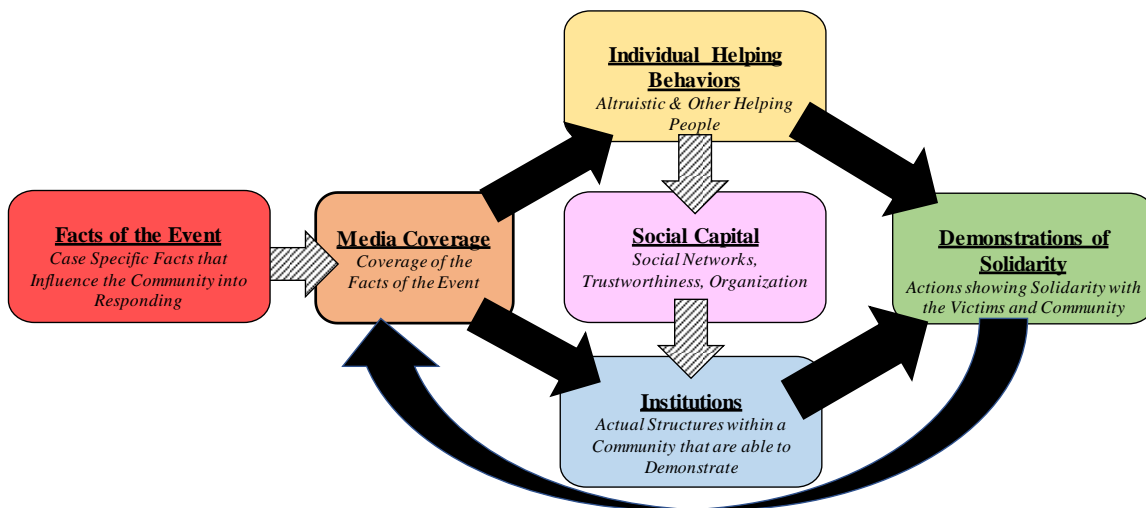


Figure 1: Solidarity Model

Event specific traits such as casualty amount, type of event, and victim type will influence people into participating in demonstrations of solidarity. Media coverage acts as an

intervening variable as the facts of the event can only be influential on individuals and institutions to respond if those facts are relayed to the community.⁶ Reporting by the media also covers demonstrations of solidarity which informs community members of their occurrence and sparks individual interest to participate in demonstrations. The facts of the event also influence institutions into responding and providing opportunities for people to demonstrate solidarity. Community institutions allow for interested people to have methods to demonstrate solidarity. These institutions often organize and solicit demonstrations of solidarity for the community. Social capital acts as an intervening variable between individuals and institutions due to the trustworthiness and social networking associated with it. Without those networks and trustworthiness in post mass casualty event processes, demonstrations of solidarity would likely be hampered.

The coverage of an event acts as an intervening variable between the facts surrounding an event and the response by the community. The media is naturally drawn to covering ongoing or potential conflicts, particularly shocking, or sensational events (Tuman 2010). Studies of United States media has found that sensationalism is a strong driving force behind what is covered (Slattery and Hakanen 1994; Adams 1978; Slattery, Doremus and Marcus 2001). Disasters, violence, crimes, sex, fires and riots are often typified as sensational (Adams 1978; Grabe et al. 2001; Hendriks Vettehen et al. 2005; Newhagen and Reeves 1992; Ryu 1982). A systematic examination of cause of death and media coverage revealed that media coverage significantly covered homicide and terrorism, even though they only account for a small fraction of overall

⁶ Media sources are only utilized for the qualitative portion of this dissertation. They are not utilized for the experiment because respondents receive necessary information through the vignette that they would normally receive through media sources.

causes of death (Shen et al. 2018). Media coverage accomplishes two things; first it informs the public as to what had occurred, often profiling victims and identifying issues surrounding response and needs within the community going forward (Harris 2018). Emotionally charged images, such as those from coverage of a mass casualty event, have been found to have a significant impact on donation behavior (Small and Verrochi 2009). Second, media coverage pressures existing institutions to act. Coverage can impact public policy and even sway policy decisions (Gilboa 2005). Previous findings indicate that media coverage and individual exposure to that coverage is a strong predictor of donation to relief agencies (Eisensee and Stromberg 2007; Brown and Minty 2008; Oosterhof, Heuvelman and Peters 2009).

The interest in sensational news is based on the assumption that people are evolutionarily predisposed to survey their environment and react to anything that may be perceived as threatening (Vettehen and Kleemans 2017). Additionally, this predisposition is used to explain why people automatically respond to salient or negative news features (Davis and McLeod 2003; Lang 2000; Shoemaker 1996). Laboratory studies have shown that sensationalist framing of negative content had a positive effect on physiological indicators like short term attention and arousal responses (Grabe et al. 2000, 2003; Lang et al. 1996; Soroka and McAdams 2015).

Social capital acts as an intervening variable between individuals and institutions within the community. Though social capital has had differing definitions, for the purpose of this dissertation it is defined as “social networks and associated norms of reciprocity and trustworthiness” (Putnam 2007). Individuals who desire to demonstrate solidarity may still do so without institutions. However, institutions organize and advertise their demonstrations, making it easier for individuals to participate in them and magnifying the effects of their efforts. If social

capital is low, then people may not trust the institutions and organizations who were coordinating demonstrations of solidarity and would not participate in them. Social capital is high when community members communicate well, trust their institutions and organize for a variety of different issues. When social capital is high, community members trust the institutional capabilities within their community and seek them out in order to demonstrate solidarity after a mass casualty event. Individual group membership is accounted for in the experiment based on the notion that if an individual is personally involved with groups, they trust them and are a part of those social networks and will thus have more access to demonstrations of solidarity.⁷

Casualties

Of the facts of an event, the number of casualties would likely impact people the most. Previous empirical findings suggest that the number of fatalities of natural disaster events positively influence the amount of money donated to recovery efforts (Evangelidis and Van den Bergh 2013). The statistical victim count of an event has also been shown to have a positive effect on donation behaviors (Lesner and Rasmussen 2014).

Casualty Effects on Demonstrations of Solidarity

There are two reasons at the individual level and one at the community level that could explain why higher casualty numbers affect demonstrations of solidarity. At the individual level, as more people are killed due to an event, then more people are likely to have been directly affected by the tragedy through familial and association-based relationships. This leads to more

⁷ Due to the difficulty in measuring social capital, it is not something operationally accounted for within the qualitative portion of this dissertation.

people participating in demonstrations of solidarity (St. John and Fuchs 2002). Death of a loved one generates a powerful emotional response that often mobilizes into individual or collective actions (Jasper 1997). Second, costlier events will be more sensational and thus draw more of a media coverage as found by Kearns, Betus and Lemieux (2019). This increased coverage of the event signals to people that there is more of a need due to the increased trauma a higher casualty count event will have. This increased signaling motivates more people to demonstrate solidarity. At the community level, a costlier event will require more institutional resources to stabilize the community. These institutions will then continue to be active within the community after the event has ended and they will organize and participate in demonstrations of solidarity. These factors suggest that:

- ***Hypothesis 1:*** Higher casualty events increase the likelihood of more demonstrations of solidarity.

$$\diamond \text{ Demonstrations of Solidarity} = \beta_0 + \beta_1 \text{CasualtyNumbers} + \beta x + u$$

Event Type

Mass casualty events originate from different sources but for the purpose of this dissertation they fall into one of the following categories: terrorism, crime, acts of nature and accidents. Some events are the direct result of intentional human action; some are accidents; and some are natural in origin. When human caused, the intention of such events creates a difference that is perceived by the community.⁸

⁸ Acts of war can cause mass casualty events and cause demonstrations of solidarity (Collins 2004). However, the acts of war the United States has faced since World War II are rare so they are not included in this dissertation.

Terrorism and crime are both violent, human-caused events. Terrorism involves a political goal that is meant to reach a larger audience (Kydd & Walter 2006; FBI 2019; GTD 2019).⁹ Examples of terrorism include 9/11 and the Boston Bombing. Violent events that do not meet these criteria are treated as criminal events. The difference between crime and terrorism is in part a matter of perception. Violent criminal events primarily cover purposefully malicious acts like murder that do not include a political motive. Violent criminal events with five or more casualties are not uncommon but prominent examples include the 2007 Virginia Tech Shooting and the 2013 Washington D.C. Naval Shipyard shooting.

Accidents are either unintentionally human caused events or occur due to a mechanical or technological failure. The people who cause them do not have a malicious intent to kill others like in criminal acts. Accidental mass casualty events are often transportation related. Well known examples of accidental mass casualty events include the Philadelphia train crash in 2015 that killed 8 and the Minneapolis bridge collapse in 2007 that killed 13.

Nature can also cause mass casualty events. Natural events include floods, mudslides, earthquakes, wildfires and weather events. Unlike some mass casualty events, natural events can sometimes be predicted and people can either evacuate or better prepare for them. For example, tracking and projection of hurricanes is common and earthquake fault lines are well known and building codes reflect the risks of the events. Natural events have the capability to create the most destruction when they occur and people often fear natural disasters more than other types of mass casualty events (Healthcare Ready 2018). Weather events include hurricanes, tornadoes

⁹ Huff and Kertzer (2016) specifically noted how the severity and extremity of violence can influence how likely an individual is to believe an event is terrorism or not.

and other types of storms. People are also most exposed to weather events, making victims more sympathetic as response to them is more relatable.

Table 1: Event Type Examples

<u>Violent</u>									
Terrorism					Crime				
Year	Location	Method	Victims	# Dead	Year	Location	Method	Victims	# Dead
2016	Dallas, TX	Firearms	Law Enforcement	6	2016	Burlington, WA	Firearms	Mall Shoppers	5
2016	Orlando, FL	Firearms	Gay Nightclub	49	2015	Roseburg, OR	Firearms	College Students	9
2015	San Bernardino, CA	Firearms	Workplace	14	2014	Isla Vista, CA	Firearms	Women	6
2015	Chattanooga, TN	Firearms	Military Personnel	6	2013	Washington D.C.	Firearms	Naval Base	13
2015	Charleston, SC	Firearms	Black Church	9	2012	Newton, CT	Firearms	School Children	28
<u>Non-Violent</u>									
Accidents					Nature				
Year	Location	Method	Victims	# Dead	Year	Location	Method	Victims	# Dead
2016	Lockhart, TX	Airballoon Crash	Passengers	16	2014	Snohomish, WA	Mudslide	Residents	49
2015	Philadelphia, PA	Train Crash	Passengers	8	2013	Yarnell, AZ	Fire	Firefighters	19
2011	Bronx, NY	Bus Crash	Passengers	11	2011	Joplin, MO	Tornado	Residents	158
2006	Lexington, KY	Plane Crash	Local Passengers	49	2011	Tuscaloosa, AL	Tornado	Residents	44
2003	West Warwick, RI	Fire	Concert Goers	100	2005	New Orleans, LA	Hurricane	Poor/Black Residents	1464

Violent Event Effects on Demonstrations of Solidarity

Violent events where numerous people are purposefully killed have a different effect upon a community than when people die by accident or act of nature. There are three reasons that explain why a violent event would cause more demonstrations of solidarity than a non-violent one. First, violent attacks cause a trauma not seen from other event types which causes a stronger emotional reaction from the community in which they occur. A violent event type shocks people within a community to feel as if they are under attack which motivates people into demonstrating solidarity. The lives of survivors of traumatic events become altered, often in revelatory and uncompromising ways (Herman 1992; Caruth 1996; Humphrey 2002; Edkins 2003). After a traumatic event, survivors are more likely work through their grief and trauma with a community that recognizes and identifies with them and a community familiar to them (Fierke 2004). Commemoration and remembrance following a traumatic event have been found to ease those

traumatic feelings (Edkins 2003). Each violent event will impact each community differently. However, a violent mass casualty event does represent a significant trauma upon a community that is not seen from other event types. That trauma then causes a strong emotional reaction within the community that leads to demonstrations of solidarity.

Second, a violent event will draw more media coverage than a nonviolent one. Crime and terrorism are both sensational in nature and draw significant, consistent coverage whenever they occur. Shen et al. (2018) examined media coverage and found that homicide and terrorism were significantly covered more than other causes of death. Violent events also often carry legal and policy narratives, which keep the event in the news cycle for a longer period of time. The activism that occurs around these narratives draws media attention and the increased media coverage increases the chances of people learning of or being reminded of an event, which motivates interested people to demonstrate solidarity.

Third, violent event types are directly caused by people, therefore, survivors and community members are likely to feel as if the event was avoidable and seek to put blame on others. These negative feelings are often directed against government leaders and will lead to more demonstrations. However, instead of those demonstrations being solely with the victims they are also against whoever is seen as being at fault. For example, the suspect in the 2018 Parkland, Florida shooting had been reported to federal and local law enforcement for suspicious behaviors. However, nothing was done to act on any of the information reported to law enforcement and many of the demonstrations that occurred following the shooting were in solidarity with the victims and against the government (Wamsley 2018). These factors suggest that:

- **Hypothesis 2:** Violent events will result in more demonstrations of solidarity than nonviolent events.

$$\diamond \text{ Demonstrations of Solidarity} = \beta_0 + \beta_1 \text{ViolentEvents} + \beta x + u$$

Terrorism is often seen as an attack upon a community, thus causing a stronger reaction amongst the victim community. Criminal events typically originate within the community and target based on individual interests. Terrorism often targets a specific group of people which can activate existing institutions within those nested communities into participating in demonstrations of solidarity. Knowledge that a specific group was targeted, for whatever reason, would also add onto the emotional reaction as it would cause similar people to feel under attack. Prior findings indicate that war and terrorism disrupt communities and cause strong emotional reactions to the violence (Hutchinson and Bleiker 2008). Additionally, major attacks, like Pearl Harbor and 9/11, have been found to inspire higher levels of community solidarity (Collins 2004). Increases in altruism, kindness and solidarity were evident following the 9/11 attacks (Abrams, Albright & Panofsky 2004; Etzioni 2002; Steinert 2003). Terrorist events have led to large amounts of donations to the victims in their aftermaths (Glynn et al. 2003). Therefore:

- **Hypothesis 2a:** Terrorist events will cause more demonstrations of solidarity than other event types.

$$\diamond \text{ Demonstrations of Solidarity} = \beta_0 + \beta_1 \text{TerroristEvents} + \beta x + u$$

Victim Type

The last event specific trait that could influence demonstrations of solidarity is the type of victim. Vulnerable groups often become victim by chance, such as when a school bus crashed in Chattanooga, Tennessee in 2016 that killed 6. Other mass casualty events strike at random

victims or groups that may not be perceived as vulnerable or sympathetic. For example, 10 people from the Hendricks Motorsports organization were killed in a private plane crash in 2004. This victim group represented a specific group; however, they were not perceived to be a vulnerable group. Demonstrations in these cases are likely stronger within those certain groups, but without a vulnerable perception, demonstrations would not be higher across a community or population. In other cases, people who plan mass casualty events intentionally target specific, vulnerable victim groups such as school children in Newton, Connecticut or the LGBT community in Orlando, Florida.

There are two types of victim vulnerability that could affect demonstrations of solidarity. The first are *traditionally vulnerable* groups (Wisner and Adams 2002). Traditionally vulnerable people are vulnerable due to age, illness, etc. Examples of traditionally vulnerable people include children, the elderly or disabled groups of people. Traditionally vulnerable victims are sympathetic to many people as they are relatable to the general population as these vulnerabilities do not discriminate across social class, ethnic or religious lines. Traditionally vulnerable people are common and often have a physical component in explaining their vulnerabilities. For example, children and the elderly often have physical limitations that prevent them from being resilient to trauma. Therefore, sympathetic people respond with more demonstrations of solidarity to compensate for those inabilities traditionally vulnerable groups have.

The second are *socially vulnerable* groups. Socially vulnerable groups include those who have a documented history of marginalization and victimization. Examples of victims of this type of vulnerability include the LGBT community, religious, gender and racial groups. Additionally, people who are victimized perceive themselves and people similar to be more

vulnerable than nonvictims (Perloff and Fetzer 1986). People who are sympathetic with socially vulnerable groups may respond with more intense demonstrations as a response to the victimization the group had experienced. People who are not a part of the victim identity group must be aware of past treatment of the victim identity group and sympathize with them for that group to be perceived as vulnerable. Socially vulnerable groups often have limitations that prevent them from being resilient to trauma. These limitations exist due to victimization and marginalization that is common within a socially vulnerable group. While most people will trust traditionally vulnerable groups, some members of the public may not perceive socially vulnerable groups as vulnerable or sympathetic. Perception of the vulnerability of these groups is dependent on the population knowing and being concerned about past victimization and marginalization of these groups. All people will not respond the same to traditionally and socially vulnerable groups.¹⁰

Victim Type Effects on Demonstrations of Solidarity

There are two reasons that explain why a vulnerable victim type would motivate a community to demonstrate solidarity following a mass casualty event. First, the identifiability¹¹ of victims of disasters has been suggested to be influential in determining donation behavior (Cryder, Loewenstein and Scheines 2013). Rosenfeld et al. (2005) proposed that people who identify with, or see themselves as similar to the victims, are in closer social proximity to the victims and will be more sympathetic and respond stronger. Media coverage of an event that is

¹⁰ A traditionally vulnerable group is used as an independent variable in the experiment while a socially vulnerable group is used as an independent variable in the qualitative section.

¹¹ Identifiability occurs when more information is relayed to the public, such as pictures of victims, individual backgrounds and specific information.

inclusive of victim characteristics allows for that traumatic event to transform from an event whose effects are limited to those immediately affected, to a collective trauma amongst those that identify with the victims. Characterization of victims as vulnerable is important as it elicits an emotional response. Perception of vulnerability is dependent on the individual, however, the media or community leadership may frame certain groups as vulnerable. However, once those victims are perceived to be vulnerable then demonstrations of solidarity will be higher. After some mass casualty events the media may consistently cover a small portion of the victim population that may be vulnerable. Media consumers will then perceive the victim group to be vulnerable based on these messages, even though the majority of the victims may not be vulnerable. For example, after the 2011 tornadoes in Joplin, Missouri, media coverage focused on destruction of the schools in the area, however, of the 158 victims, only seven were students from area schools (NPR 2011).

Second, once the victims are identified and perceived to be vulnerable by the general public then people within the community will attempt to help by demonstrating solidarity with them. The perception of victims as vulnerable causes a strong emotional reaction amongst people similar or sympathetic to the victims. Empathy¹² and compassion with victims may help to generate social activities conducive to attempted healing of trauma, what is referred to as demonstrations of solidarity in this dissertation (Gobodo-Madikizela 2002; Halpern and Weinstein 2004; Schaap 2006). Once the characterization of the victims takes place, then the event becomes more of a collective trauma as non-involved individuals begin sympathizing with the victims. Individuals may sympathize with the group or know someone within that vulnerable

¹² Empathy generally involves the ability to identify with the situations or experiences of others (Hutchinson & Bleiker 2008).

victim group, which may compel them to demonstrate solidarity with the victims. These factors suggest that:

- **Hypothesis 3:** Events that harm victims who are perceived as vulnerable will generate more demonstrations of solidarity.

❖ Demonstrations of Solidarity = $\beta_0 + \beta_1 \text{VictimType} + \beta x + u$

Institutionalization of Community

Beyond the facts of an event, institutions play a key role in generating demonstrations of solidarity. Institutional response to a mass casualty event could be perceived as a demonstration of solidarity itself. However, for the purpose of this dissertation the response is an independent variable (x), and what they actually do is the dependent variable (y). The roles institutions play in organizing and coordinating demonstrations of solidarity can lead to more demonstrations of solidarity as more individuals become involved. Prior research has identified institutions like local governments, private businesses, and nonprofit organizations as crucial partners in all phases of emergency management; this includes building capacity, social capital and more resilient communities (Edwards 2013; Kapucu 2006; Waugh 2003). Institutions play an important role in building community resilience to disasters and resilient communities are the ones able to demonstrate solidarity to their potential (Langeland et al. 2016; Chandra et al. 2011). This dissertation classifies institutions in four ways: (1) government, (2) business/economic, (3) non-profit, and (4) specific institutions.

Government institutions include elected leaders, their offices and agencies. Government institutions often have considerable resources to devote to the first response and short-term responses to traumatic events that occur within their community. Governments have a convening

authority and a responsibility to respond to mass casualty events. Specifically, local government institutions have been found to have higher levels of public trust than federal and state level institutions (McCarthy 2018). Therefore, when local government institutions become involved in demonstrations, community members trust them. Elements of government institutions like emergency managers and emergency services are often the most prepared to provide initial responses to traumatic events within a community as they are often part of emergency response and preparedness plans. These individuals then often coordinate with other institutions as demonstrations of solidarity commence.

Business/economic institutions are locally located establishments that are a part of the area's economic makeup. Some of which have a vested interest in the wellbeing of their community. Businesses are likely to support demonstrations of solidarity but rarely conduct them on their own. Findings show that areas with locally active companies received help quicker and recovered faster from disasters than communities without strong local businesses or who relied on traditional relief (Ballesteros, Useem and Wry 2017). Additionally, businesses have been found to play an important role in long term disaster recovery (Chikoto, Sadiq and Fordyce 2013). For example, the casinos and entertainment businesses were active in demonstrations following the Las Vegas shooting in October of 2017 (Raz 2017).

Non-profit institutions are organizations that are not directly affiliated with governments or oriented to profit. These organizations often provide community services and routinely respond to community trauma. Some of these organizations are nation or worldwide but have local chapters or affiliations. Many of these institutions serve the general community and often respond to events regardless of event type or victim type. These institutions often take leading roles in organizing demonstrations that help local residents respond to and recover from disasters

(Gazley 2013; Kapucu, Yuldashev and Feldheim 2011). Examples of these institutions that respond to mass casualty events include the United Way, Red Cross, or blood donation organizations.

Specific institutions are defined as non-governmental institutions that were founded by and primarily serve a specific community nested within a larger community.¹³ These groups are often considered a sub-section of non-profit institutions (Cammatt and MacLean 2014; Sledge and Thomas 2019). Some specific institutions exist to represent, organize or serve socially vulnerable groups based on ethnicity or race, sexual orientation, gender, religious beliefs etc. Examples of such institutions include the National Association for the Advancement of Colored People, The Center (LGBT), and various religious groups. Some specific institutions respond to community trauma as part of their core mission, regardless of the victim involvement with their institutions. These institutions would still be considered specific institutions because they were founded to or mostly serve a specific population. For example, the Salvation Army is a Protestant-Christian denomination, however, disaster response, aid and charity are core values the group holds and they respond to disasters regardless of victim type. In some cases, specific institutions may also not respond because they are not representative of the victim group and they are not sympathetic to the victims. When a specific group is afflicted by such an event, new institutions may form in order to fill a void that becomes apparent after a traumatic event happens. Essentially, the creation of these new institutions in response to such an event become a demonstration of solidarity themselves.

¹³ For the purpose of this dissertation no government institutions are considered specific institutions. I recognize that they exist (ex. Indian Reservations), however they are rare in the U.S.

A strong response from any one of these categories of institutions may lead to higher demonstrations of solidarity. Additionally, strong institutional responses in other categories would increase the likelihood of more demonstrations of solidarity. Though the institutions and their structures are the main method in which demonstrations of solidarity could be increased, it is important to recognize that individual representatives of institutions can also influence demonstrations.

There is an individual leadership aspect to institutionalization. For example, leaders of institutions are often wealthy, prominent members of a community. They often receive media coverage and are most often known for their involvement with one form of institution previously mentioned. The best example of institutional leadership would be the mayor of a community. The mayor would be looked to for leadership following a mass casualty event. If the mayor responded with strong leadership by frequently speaking to the media, soliciting for demonstrations, and working with other groups, etc. then demonstrations of solidarity would be positively affected. Eldridge (2005) found that availability of information on how to donate, as communicated by local leaders in this case, is paramount in predicting donation behavior. If these individuals have a particular investment in a community then they would be likely to positively influence demonstrations of solidarity either through solicitation of demonstrations or through a personal contribution. Other individuals, like business leaders, may be personally invested in an area and donate as a demonstration of solidarity, but due to their personal success they are able to make a significant contribution. For example, in 2017 Houston native and tech billionaire Michael Dell pledged \$36 million for Hurricane Harvey relief after it devastated the Gulf Coast of the U.S. (Yurieff 2017). While this is only a single demonstration, it is an intense demonstration that the majority of other Houston residents would not have been able to conduct.

Institutional Effects on Demonstrations of Solidarity

Institutions have a direct impact upon demonstrations of solidarity for five reasons. First, institutional collaboration in humanitarian relief operations are important for effective disaster relief (Telford and Cosgrave 2007). These partnerships facilitate disaster response by providing a method to exchange knowledge and skills by participating institutions (Kapucu 2006). Second, a strong non-profit institutional response can bring experience in organizing effective demonstrations. Non-profit institutions bring considerable resources and name recognition when responding to disasters. Sledge and Thomas (2019) found that these institutions critically shaped disaster response and recovery because they “quickly provide services that may not be provided by governments, their flexibility, and their unique capacity to reach marginalized populations.” If community members see the response of one of these groups it could legitimize the demonstrations of solidarity that are occurring and motivate people to help.

Third, business institutions can bring a considerable amount of resources to demonstrations of solidarity. If an afflicted area is economically well off, then there is likely to be strong business involvement in demonstrations of solidarity. These businesses not only directly provide aid to the area but they can also solicit funds for disaster relief themselves. Economically weak areas will have limited business involvement in demonstrations, and people in economically weaker areas would be more financially strained and would be less able to demonstrate solidarity even if they wanted to. Fourth, communities that are institutionally dense are likely to have high profile representatives of those institutions that are active members of the community. These individuals are able to provide essential leadership following a mass casualty event and they can solicit demonstrations of solidarity or make a significant demonstration

themselves through their increased institutional capability. Fifth, institutions can act as social networks and larger social networks have been found to increase demonstrations of solidarity (Haines et al. 1996; Kaniasty and Norris 1995; Schervish and Havens 1997; Burr et al. 2005; Music and Wilson 2008; Lee and Brudney 2012).

The individuals in a community may be intent on responding resiliently and demonstrating solidarity strongly following a mass casualty event, however, without strong institutions that response can be impeded until people within the community can organize themselves or they lose interest. Areas with low institutionalization include rural areas where government reach is minimal and poor areas with low business/economic involvement. Specific institutions are likely to respond whenever the groups they represent are victimized. Non-profit institutions are also likely to respond whenever a major event happens. However, in the case of both specific and non-profit institutions, these groups are likely to respond stronger in more densely populated areas where they may have an existing influence. Institutions allow for a quick and organized response and without that existing infrastructure demonstrations would at least be delayed until the community can organize themselves. The longer organization of demonstrations take, the quicker people would become no longer interested in participating in meaningful demonstrations. Without the availability of institutions, community members who desire to demonstrate solidarity but have no means to do so would respond selectively and in less meaningful ways, such as a social media response. These factors suggest that:

- ***Hypothesis 4:*** Victim communities that have a higher level of institutionalization will have more demonstrations of solidarity following a mass casualty event.
- ❖ $\text{Demonstrations of Solidarity} = \beta_0 + \beta_1 \text{Institutionalization} + \beta x + u$

Outside of the traditional first response that is expected from local government agencies, strong government institutions and their leaders play an important part in how a community responds to a mass casualty event. A strong governmental response can not only contain a disaster and limit the damage but also government leadership can actively solicit funds. People within a community look first to their government when a community trauma occurs. Involved political leaders are a demonstration in itself, however, their involvement attracts interested individuals into demonstrating. In some communities elected officials are more involved than in others. Leaders of government institutions have up to date knowledge of an area and are able to identify the resources that a community possesses and gaps in community needs (Edwards 2013). Strong leaders are consistently in the media and they are popular within the areas they govern. Other elected officials are rarely seen outside of official government businesses and they remain mostly unknown even within the areas they govern. Government involvement or the endorsement of political leaders in demonstrations legitimizes the demonstrating process. Additionally, strong government institution leaders commonly collaborate and work with other institutions in order to facilitate demonstrations. The agreements government institutions have in place with other institutions to respond when a disaster strikes makes government institutions more powerful. Government institutions, the leadership they provide and the relationships they often have with other institutions make a strong government institutional leadership response crucial if strong demonstrations of solidarity are to happen. Therefore:

- ***Hypothesis 4a:*** A strong response from government institution leaders will lead to more demonstrations of solidarity.
- ❖ Demonstrations of Solidarity = $\beta_0 + \beta_1 \text{GovernmentInstitutionalLeadership} + \beta x + u$

When a specific group is the victim of a mass casualty event, that group may have a higher level of institutionalization than other groups of people. Vulnerable communities often have existing institutions within their communities that were founded with the purpose of serving members of that vulnerable population (Cammett and MacLean 2014). The best examples of specific institutions providing support is for socially vulnerable groups. For example, numerous LGBT groups participated in demonstrations of solidarity following the Pulse shooting in 2016. However, traditionally vulnerable groups also receive institutional support. For example, schools across the nation participated in demonstrations of solidarity following the 2012 Newton Connecticut shooting that targeted elementary school students. Whenever trauma, such as a mass casualty event, affects the community in which these specific institutions are active, they are likely to mobilize, coordinate and participate in demonstrations of solidarity. The coordination they provide allows for interested individuals to participate in demonstrations of solidarity through those specific institutions they usually would not have been involved in. These institutions often have existing members, donors and structures that makes it easier for them to quickly organize demonstrations. A strong specific institutional response is important due to increased media coverage, ability to quickly organize and their closeness to specific victim types. However, a strong specific institutional response is not likely to happen unless a specific victim group is the victim of a mass casualty event. Therefore:

- ***Hypothesis 4b:*** A strong specific institutional response will lead to more demonstrations of solidarity.
- ❖ Demonstrations of Solidarity = $\beta_0 + \beta_1 \text{Specific Institutionalization} + \beta x + u$

Theoretical Conclusions

This theory attempts to explain how event specific traits and existing institutions can influence demonstrations of solidarity to occur following a mass casualty event. Examining demonstrations of solidarity following mass casualty events in these ways reveals limitations. For example, other event specific traits like extent of property damage and number of injuries are closely related to some of the independent variables and could logically influence individual desires to help and thus demonstrations of solidarity. Additionally, community specific traits could also influence demonstrations of solidarity. For example, the familiarity a community has with trauma could influence demonstrations of solidarity in two contradictory ways. First, if a community has experienced prior mass casualty events then they may be more resilient and have existing institutions to demonstrate solidarity. Gal (2013) found that communities who experience repeated traumas collectively exhibited signs of resilience through a quick return to normalization. Alternatively, a community may also feel trauma fatigue if traumatic events strike their community often. Trauma fatigue and the associated lack of emotional response to motivate people to participate would lead to less demonstrations of solidarity.

Because of the wide array of variables likely to influence demonstrations of solidarity it is logical to utilize an experimental approach to test these ideas. However, an experimental method removes the emotional element that is important in warranting a response to such a traumatic event. Living in a community where a mass casualty event happened, seeing the event be covered through media sources and knowing people affected by such an event are two influential factors that could not be effectively relayed through an experimental approach. Nonetheless, experiments are an important step in measuring demonstrations of solidarity based

on event specific traits. The wide array of variables that could influence demonstrations of solidarity makes a qualitative approach a logical step. A comparative case study approach would allow for a thorough and more invasive evaluation of communities following a mass casualty event. However, effectively drawing causal inferences and attributing them to the independent variables of interest would be challenging as having cases that are similar along all variables of interest except one would be difficult.

CHAPTER 4: EXPERIMENTAL APPROACH

This section seeks to answer questions regarding an individual and community's reaction to a mass casualty event through the use of survey experiments. A survey experiment is a purposeful manipulation of key variables within a survey instrument for the purpose of inferring how the respondent is affected by those variables (McDermott 2002). Random assignment of respondents into control and treatment groups will allow for causal inferences to be made based on the comparisons of the decisions made by the individuals in each group (Druckman et al. 2006).

Experimental methods are rarely used to measure the effects of a mass casualty event due to the unpredictable nature of such events and the traumatic effects they can have on people. Rasanen et al. (2014) utilized two sets of surveys mailed out in 2008 (before and after a school shooting) to see if the recurrence of a potential mass casualty event changes the relationship between solidarity and the perception of different types of risk. They found that once tragedies became more common the protective functions of social solidarity that help communities reduce their worry associated with risks (in this case the shooting) tended to diminish.

Measuring a community's response to a mass casualty event begins at the individual level, so the use of a survey experiment is a natural fit. However, the use of a survey experiment to measure demonstrations of solidarity after a mass casualty event has never been undertaken before so any empirical results will be a first step in better understanding this phenomenon. Three hypotheses are tested across three experiments. The hypotheses tested are:

1. higher casualty events increase the likelihood of more demonstrations of solidarity

CasualtyNumbers(X)  DemonstrationsOfSolidarity(Y)

2. *violent events will result in more demonstrations of solidarity than nonviolent events*

ViolentEvent(X)  DemonstrationsOfSolidarity(Y)

a. *terrorist events will cause more demonstrations of solidarity than other event types.*

TerroristEvent(X)  DemonstrationsOfSolidarity(Y)

3. *events that harm victims who are perceived as vulnerable will generate more demonstrations of solidarity.*

VictimType(X)  DemonstrationsOfSolidarity(Y)

Results are mixed and appear to support a null hypothesis regarding hypothesis 1 and hypothesis 2. However, when testing hypothesis 3, results are very supportive. As results are further analyzed a discussion is provided regarding what constitutes a mass casualty event in terms of casualty number and the differences between event types.

This chapter consists of five sections. The first begins with an introduction to the experiments and includes the text each respondent received. The second section connects the experiments to their appropriate hypotheses and discusses the independent variables. The third section examines the dependent variables measured across the experiments and the control variables. The fourth section begins with some descriptive statistics regarding the variables before the results for each experiment are examined more closely. The fifth and sixth sections further analyze the findings of the survey experiment and interpret the results.

Experiment Introduction

The nature of a survey experiment such as this makes the unit of analysis at the individual level. Therefore, a convenience sample was utilized and this survey was disseminated to UCF undergraduate students (n=225).¹⁴ Each respondent first answered nine demographic, descriptor and psychometric questions meant to measure basic attributes about each respondent. They then received their first vignette which tested hypothesis 1, followed by five questions meant to measure their responses to that event. They then faced a short distractor asking them to rank presidents in either ascending or descending order. They then faced their second vignette meant to test hypothesis 2 and five questions meant to test their responses to that event. They then faced a short distractor asking them to complete a numerical sequence (All distractor tasks available in Appendix). Respondents then faced their final vignette meant to measure hypothesis 3, followed by final five questions meant to measure their responses to that event. In order to provide additional variation across vignettes, hypothesis 2 (*violent events will result in more demonstrations of solidarity than nonviolent events*), is tested across all three experiments as respondents answered either a violent or nonviolent event type in their vignettes in experiment 1 and experiment 3.

Experiment 1

The first experiment manipulated the number of casualties and event type. Respondents received either a weather or terrorism related event:

Imagine that:

¹⁴ IRB Explanation of Research and Approval Letter are provided in the Appendix B

- your community was struck by a **strong tornado**. According to the National Weather Service winds reached well over 200mph as the tornado tore through the area leaving [2/6/23] dead and many other injured

OR

- a large car bomb went off in your community killing [2/6/23] people and leaving many others injured. The responsible party was apprehended leaving the area and the incident is currently being investigated by Federal authorities as an **act of terrorism**

The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Experiment 1 tests hypothesis 1; *higher casualty events increase the likelihood of more demonstrations of solidarity* and hypothesis 2/2a that violent event types (terrorist in this case) will result in more demonstrations of solidarity. The independent variable values were selected because the first option (2) is below the five threshold that is often referred to as the minimum for a mass casualty event. The second option (6) is near that threshold while the third option (23) is significantly higher. Each respondent received either of the event types and victim counts at random.

Experiment 2

The second experiment only manipulates the type of event and respondents randomly received either a weather, terrorism, accident or criminal event.

Imagine that:

- your community was struck by a **powerful tornado**. According to the National Weather Service winds reached well over 200mph as the tornado tore through the area.
- a large car bomb went off in your community. The responsible party was apprehended leaving the area and the incident is being investigated by Federal authorities as an **act of terrorism**
- a four-lane **bridge lost structural integrity** during local rush hour and collapsed within your community
- a mass murder occurred in your county. An individual shot and killed several people during an attempted bank robbery which turned into a hostage situation. The responsible

individual was later taken into custody by local law enforcement and **charged with the attempted robbery and numerous murder charges** for the deaths he caused.

The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway

- The second experiment tests hypothesis 2; ***violent events will result in more demonstrations of solidarity than nonviolent events*** and hypothesis 2a; ***terrorist events will cause more demonstrations of solidarity than other event types.***

Each vignette is framed in a way that does not specify the number or type of casualties and they are only referred to as a mass casualty event in order to attribute any responses to the variation provided (event type).

Experiment 3

The third experiment manipulates the type of victims for each event along with event type. Respondents received either a crime or accident related event.

Imagine that:

- a mass murder occurred in your county. An individual shot and killed several people during an attempted bank robbery which turned into a hostage situation. The responsible individual was later taken into custody by local law enforcement and **charged with the attempted robbery and numerous murder charges** for the deaths he caused.
- a four-lane **bridge lost structural integrity** during local rush hour and collapsed within your community

Victims are mainly:

- school age children who were on several different school buses
- seemingly random commuters

The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Experiment 3 tests hypothesis 3; *events that harm victims who are perceived as vulnerable will generate more demonstrations of solidarity* and hypothesis 2; *violent events will result in more demonstrations of solidarity than nonviolent events*. The first value for the independent variable (school age children) was selected because children are a traditionally vulnerable victim group that spans across cultures. According to the World Health Organization (WHO), children, elderly, malnourished and ill people are the most vulnerable when a disaster strikes (Wisner and Adams 2002). The second value (random commuters) is included to account for events where random or non-vulnerable groups make up the majority of victims. Respondents received at random either event type and either victim type.

Dependent Variables

The dependent variables measured across all the experiments is the propensity of respondents to participate (or not) in a variety of different types of demonstrations of solidarity following a mass casualty incident. The demonstrations of solidarity measured are social media response, volunteering of time, donation of blood, monetary donation and event participation. A factor analysis is then conducted with the demonstrations of solidarity for each experiment. Those factors that are created are then used as a dependent variable. These demonstrations of solidarity were chosen because they cover the spectrum of possible demonstrations (including symbolic and actual demonstrations) available to members of a community after a mass casualty event.

The first response available to respondents is how they will respond via social media and is measured dichotomously based on whether or not their social media activity would reflect the event that occurred. Though social media is used more by younger generations, it is often the

first line of access individuals have to respond to an event that happens within the community. For example, many community organizations utilize social media to organize and coordinate events. The logic behind the inclusion of this variable is based on the notion that social media is incredibly widespread, so when a mass casualty event happens, people will look to their profiles for information regarding the event. Social media is also a means of communication with other community members to check on their wellbeing and to notify other individuals of their wellbeing, often through a marking of “safe” or a changing of their profile pictures. Individuals who only possess minimal desires to demonstrate or who may not have the means to respond in other ways may respond “slacktively” through social media. This variable is represented in the following results tables as *SocialMediaResponse* and respondents received the following question:

- **Question 1:** In the week following the mass casualty event, would any of your social media activity (Facebook, Twitter, Instagram etc.) be in response to the event? (ex. Posts/hashtags related to event, marking yourself as “safe,” changing pictures etc.)
Answer 1: Option 1- Yes. Option 2- No. Option 3- Not involved with social media

The second demonstration of solidarity measured is how much free time (out of 2 hours/120 minutes) a respondent would devote to relief efforts. The inclusion of this variable is based on the notion that the individuals will respond to the mass casualty events that occurred within their community by volunteering their time to relief efforts. Relief efforts often take the form of physical cleanup (such as after a weather incident), providing voluntary victim services or other time-consuming acts done in response to an event. This variable is represented in the following results tables as *VolunteerTime* and respondents received the following question:

- **Question 2:** Out of two hours of free time in the week following a mass casualty event, how much of that time would you devote to relief efforts?
Answer 2: Out of 120 minutes

The third demonstration of solidarity measure is dichotomous and asks whether or not an individual would donate blood following a mass casualty. The inclusion of this variable is based on the notion that individuals will often look to donate blood as a means to assist their fellow community members who may have been injured during a mass casualty incident. Violent events more often cause an increase in blood donations as community members find this is their best way to help. While recent empirical findings confirm that an increase does occur, very rarely do those blood donations provide actual assistance (Lozada et al. 2019). This variable is represented in the following results tables as *BloodDonations* and respondents received the following question:

- **Question 3:** Would you donate blood in the week following the mass casualty event?
Answer 3: Option 1- Yes. Option 2- No

The fourth demonstration of solidarity is how much money (out of \$100) would a respondent donate towards relief efforts. The inclusion of this variable is based on the notion that individuals will be more likely to donate money to victim's relief funds, charities etc. that are working in the affected areas. These donations are often useful in restoring and reconstructing after a disaster and are much better suited than the donations of goods (Heimbürger 2018). This variable is represented in the following results tables as *MoneyDonations* and respondents received the following question:

- **Question 4:** If you had \$100 in the week following an event that you were not using for anything else, how much (if any) would you donate to a charitable or relief effort related to the event?
Answer 4: Out of \$100

The fifth and final demonstration of solidarity is whether or not an individual would participate in an incident specific event (ex. vigils) following the mass casualty incident and is

measured dichotomously. Events often take place to show solidarity with an affected community and first happen at the local level, though they can often spread worldwide for major mass casualty incidents. Post et al. (2003) explains “In a general therapeutic context rituals are recommended as an element in the process of handling grief and other emotions following a disaster.” The candlelight vigil serves as a reaction and response because it gathers a community together to stand as one when conditions are difficult. The inclusion of this variable is based on the notion that individuals will participate in a community event to show solidarity with the affected communities following an incident. The final question respondents received was regarding participation in events following a mass casualty event and is represented in the following results tables as *EventParticipation*; it is as follows:

- **Question 5:** Would you attend a large group event immediately following the mass casualty event meant to show solidarity with the victims and community? (Ex. candlelight vigil)

Answer 5: Option 1- Yes. Option 2- No

A factor analysis creates a matrix of intercorrelations amongst a set of variables (in this case our experiment specific demonstrations of solidarity) in order to determine to what extent those variables are related.¹⁵ If the data analyzed has little to no variation, only one factor can be derived from the data, if there is more variation more factors will be derived (Rummel 1970). The dependent variables from the first experiment contain a significant amount of variation so two factors were created. The dependent variables for the second and third experiments contain little variation so only a single factor was created for each. Based on those matrices it is apparent that the variance within the dependent variables of Experiment 1 is much more dispersed. Factor 1 only accounts for 33% of the variance within the variables whereas Factor 1 accounts for 43%

¹⁵ See Appendix B.4 for Factor Analysis Matrices

and 46% of the variance in Experiment 2 and Experiment 3, respectively. Within Experiment 1, Factor 1 is mostly defined by the variables Money, Blood, and Time, whereas Factor 2 is mostly defined by variables Social Media and Event. Within Experiment 1, the first Factor Analysis variable is represented in results tables as *X1F1* while the second one is represented as *X1F2*. The factors created within both Experiment 2 and 3 are also mostly defined by Money, Blood, and Time, however, the variance does not reach the levels to where another factor would be created. Within Experiment 2 the Factor Analysis variable is represented in results tables as *X2F* while the Experiment 3 Factor Analysis variable is represented as *X3F*. Each factor generated is analyzed using OLS against each of their respective experiment's independent variables in the same manner the other demonstrations of solidarity were analyzed.

Control Variables

Other variables of interest to this study include mainly demographic and descriptive questions along with a single psychometric question designed to provide a better insight into the characteristics and behaviors of who is participating in this study. Focused on demographics, there are six characteristics considered. First is the age of the respondent and is included based on previous findings that indicate an age-based positivity bias exists in regards to charitable giving (Bjalkebring et al. 2016). The age question respondents received is as follows:

- ***Question 1:*** How old are you?
Answer 1: blank space allowing respondents to input in their year of birth.

Second is the inclusion of a gender variable based on previous findings that indicate that women tend to provide more charity due to higher empathetic concerns (Mesch et al. 2011). Individuals who indicated that they did not have a sex were removed from the final analysis

which allowed a true dichotomous gender variable. The gender question respondents received is as follows:

- **Question 2:** What is your sex?
Answer 2: Option 1- male Option 2-female Option 3-no sex

Third is an eight-point scale asking the highest education an individual has completed. The inclusion of this variable is based on numerous prior findings that indicate that people who have higher education will be more altruistic and donate more (Yen 2002; Andreoni et al. 2003; Bekkers and Wiepking 2011). The question respondents received regarding their education level is as follows:

- **Question 3:** What is the highest level of school you have completed or the highest degree you have received?
Answer 3: Option 1-less than high school. Option 2- High school graduate or equivalent (ex. GED). Option 3-Some college but no degree. Option 4- Associates Degree (2 year). Option 5-Bachelor's Degree (4 year). Option 6- Master's Degree. Option 7- Doctoral Degree. Option 8- Professional Degree (MD, JD etc.)

The fourth variable of interest is the income level of respondents and it is measured on a seven-point scale (1 = less than \$30,000, 7 = \$80,000 or more). Higher income status has been found to directly affect giving behaviors, both amount and frequency (Bracha and Vesterlund 2013). The income level question respondents received is as follows:

- **Question 4:** Describe your income (before taxes):
Answer 4: Option 1-less than \$30,000. Option 2- \$30,000-\$39,999. Option 3- \$40,000-\$49,999. Option 4- \$50,000-\$59,000. Option 5- \$60,000-\$69,999. Option 6- \$70,000-\$79,999. Option 7- More than \$80,000

Fifth is a seven-point scale for political ideology (1 = far left, 7 = far right). The inclusion of this variable is based on the notion that political ideology affects the types of giving. Previous

findings indicate that politically conservative individuals reported higher levels of giving (Paarlberg et al. 2018). The political question respondents received is as follows:

- **Question 5:** On the scale below indicate your political leanings: (0-10)
Answer 5: 0: Far Left. 5: Independent. 10: Far Right

The sixth general demographic question is regarding religiosity and measures respondents' levels of religious activity based on a four-point scale (1= not religious, 4= very religious.) More religious people have been found to have higher life satisfaction and thus, give more to charity (Sibley and Bulbulia 2014). The religious question respondents received is as follows:

- **Question 6:** How often do you attend religious services per week (4-point scale).
Answer 6: Option 1- None. Option 2- 1. Option 3- 2-3. Option 4- More than 3.

The final three control variables are believed to directly affect how an individual would react following a mass casualty event and falls in line with the aforementioned theory. The first is a four-point measure of group membership and asks respondents how many social, civic or organizational groups they are personally a member of (1 = none, 4 = more than 3). Individuals who are members of groups theoretically have more accessibility to demonstrations. It is as follows:

- **Question 7:** How many social, civic or organizational groups are you a member of? (ex. Alumni associations, charitable/neighborhood groups, fraternities/sororities etc.)
Answer 7: Option 1- None. Option 2-1. Option 3-2-3. Option 4- More than 3

The next is a five-point psychometric measure of altruism and asks respondents how often they would go out of their way to do something nice for a stranger (1 = never, 5 = very often). The altruistic measure respondents received is as follows:

- **Question 8:** Would you go out of your way to do something nice for a stranger?
Answer 8: Option 1- Very often. Option 2- Often. Option 3- Occasionally. Option 4- Not Often. Option 5- Never.

The final control variable is four-point scale meant to measure an individual experience with a mass casualty event (1 = no experience, 4 = experienced firsthand). This variable is based on the idea that individuals who have experienced a mass casualty event before and survived will be more likely to participate in demonstrations of solidarity because they have a greater understanding of mass casualty events and how they affect the community.

- **Question 9:** Have you ever experienced an event where a large number of people were killed in a single incident? (including military service)
Answer 9: Option 1- No. Option 2- Knew someone who was a victim of an event and survived. Option 3- Knew someone who was killed during an event. Option 4- Experienced firsthand

Sample Characteristics

Table 2 displays the descriptive statistics for all control variables across the sample. The standard deviations in the table represent a selection based on the ranges provided through the questioning. The minimums and maximums listed also represent selections based on the questioning range, with the exception of age, which represents a true value. A sample restricted to college students is fairly limiting as only about a third of Americans have any sort of college degree (Census 2017). However, scholars argue that results from a survey using a convenience sample of college students is valid and reliable and results are generalizable to other populations when the survey is reliant on basic psychological processes as opposed to general demographics Kardes (1996) and Lucas (2003).

As expected with such a sample, the majority of respondents were young (See Figure 3), and not very religious (See Figure 6). In addition to age and religiosity, the limitations of the sample are also evident in that the majority of respondents had an Associates Degree (See Figure 4) and little income (See Figure 5).

Table 2: Sample Descriptive Statistics

Variable	Mean	SD	Min	Max	N
Age	24.03	8.31	18	79	225
Sex	0.55 (Slightly More Female)	0.49	0	1	225
Education	3.75 (Just Below Some College)	0.89	1	7	225
Income	1.76 (Just Below \$30,000-\$39,999)	1.7	1	7	225
Politics	4.62 (Slightly More Liberal Than Independent)	2.37	0	10	225
Religion	1.34 (Slightly Above None)	0.70	1	4	225
Group Membership	2.03 (Slightly More than One)	0.94	1	4	225
Altruism	2.41 (Between Often and Occassionally)	0.83	1	5	225
MCE Familiarity	1.48 (No Experience)	0.93	1	4	225

While the sample limitations are evident, it is important to note that the population is still very heterogeneous. For example, the slightly female dominant gender distribution is positive in that recent U.S. census data has indicated that there are more females than males within the country (See Figure 2). The political breakdown of the sample is also a good sign mainly because no one group represents more than half of the sample. 40% of respondents were moderates (those who indicated 4-6 on the question) followed by 35% liberal (0-3) and 25% conservative (7-10) (See Figure 7).

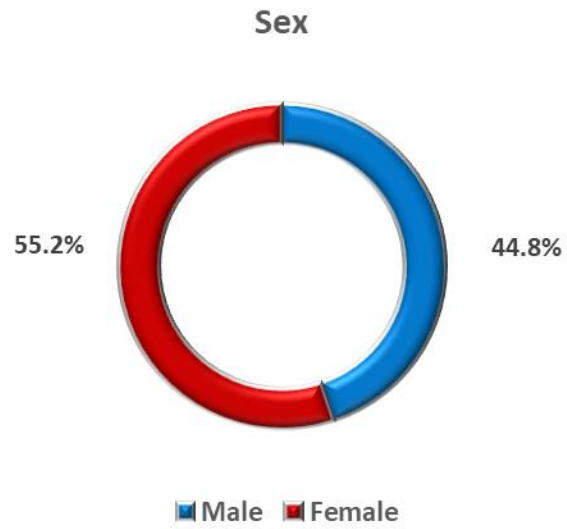


Figure 2: Sample Sex Characteristics

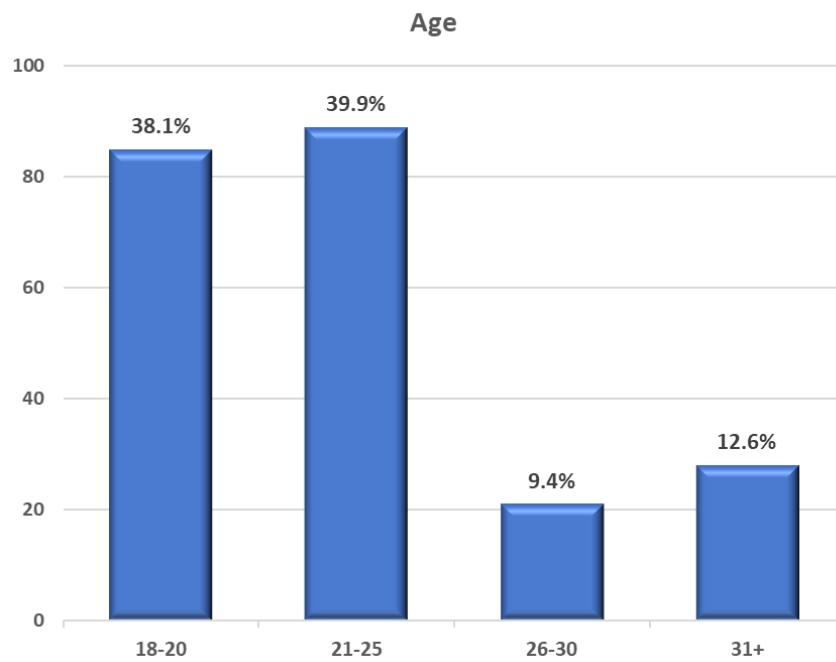


Figure 3: Sample Age Characteristics

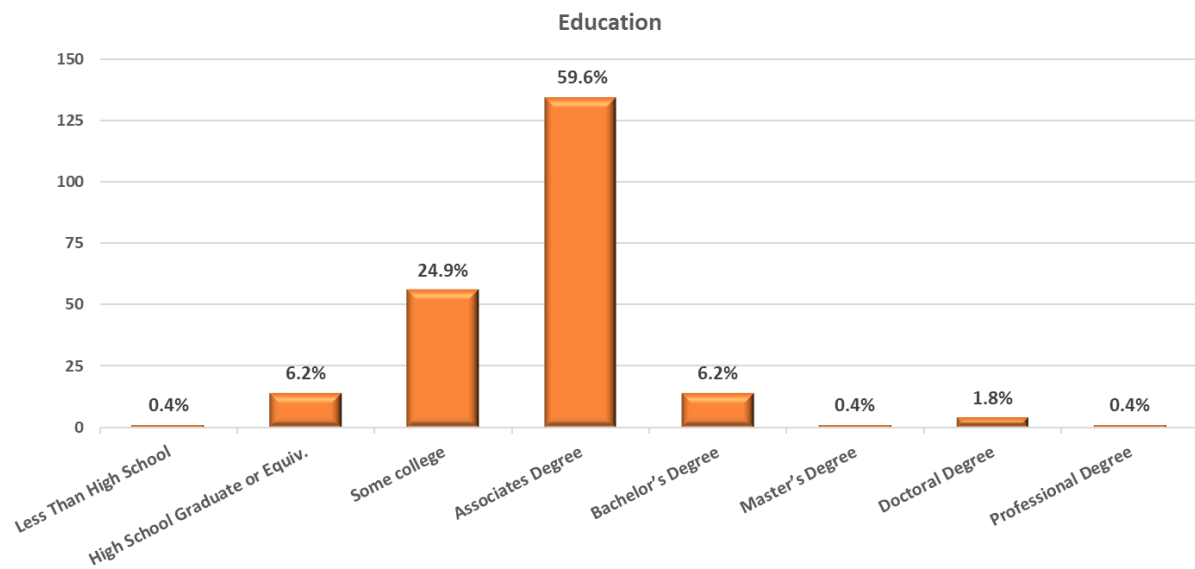


Figure 4: Sample Education Characteristics

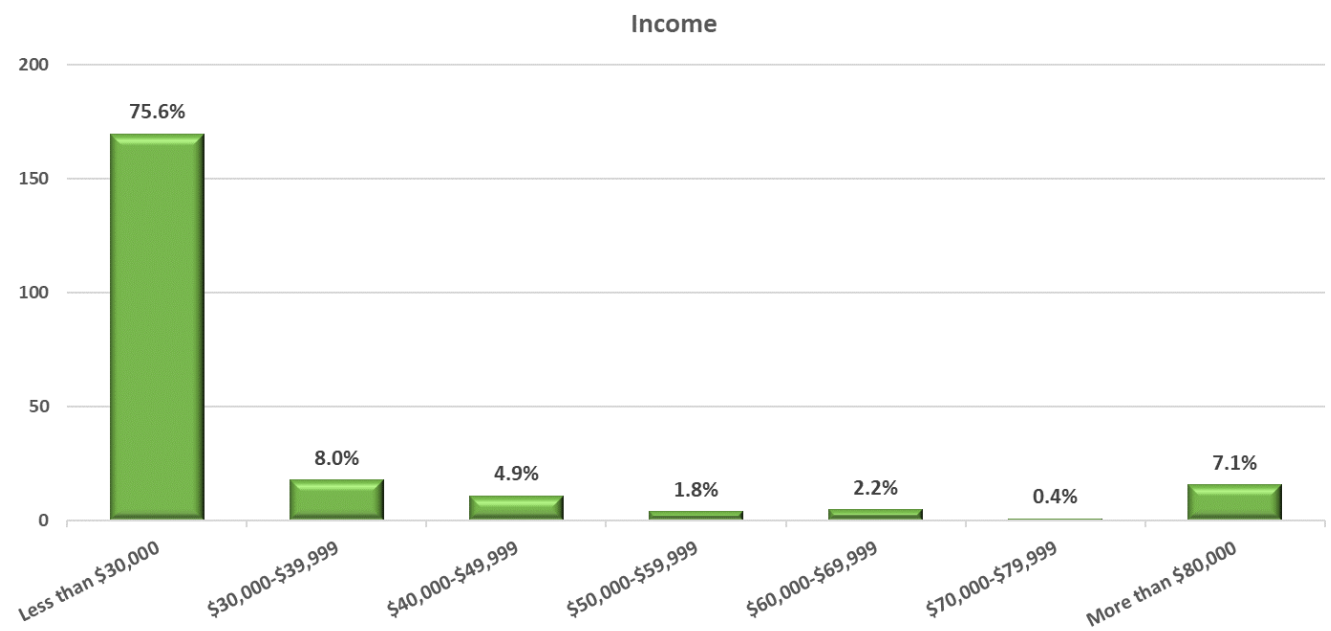


Figure 5: Sample Income Characteristics

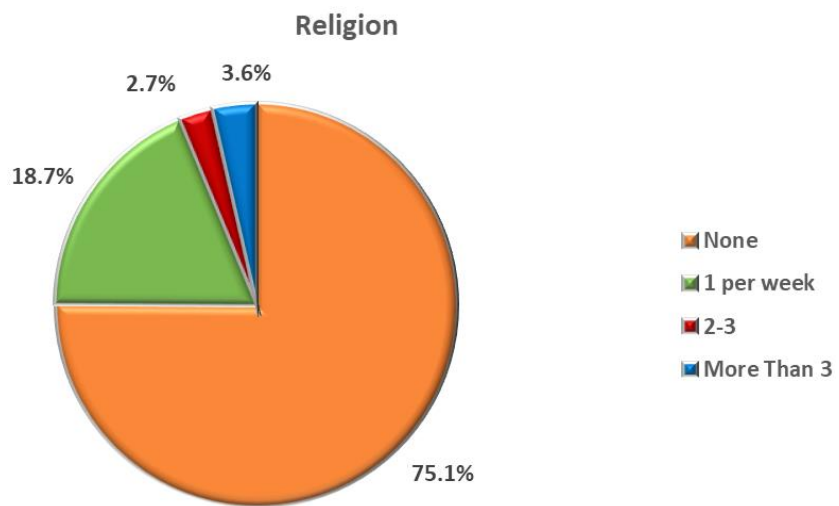


Figure 6: Sample Religion Characteristics

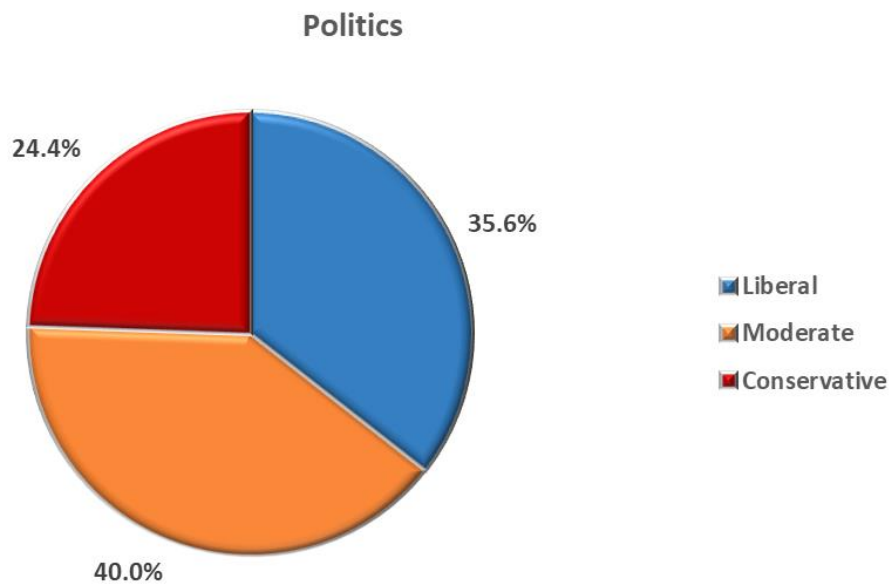


Figure 7: Sample Political Characteristics

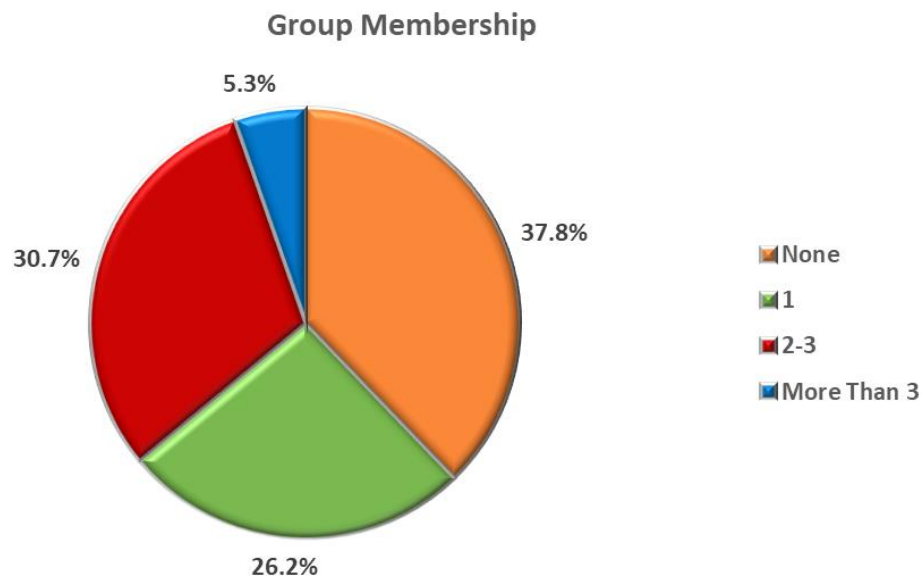


Figure 8: Sample Group Membership Characteristics

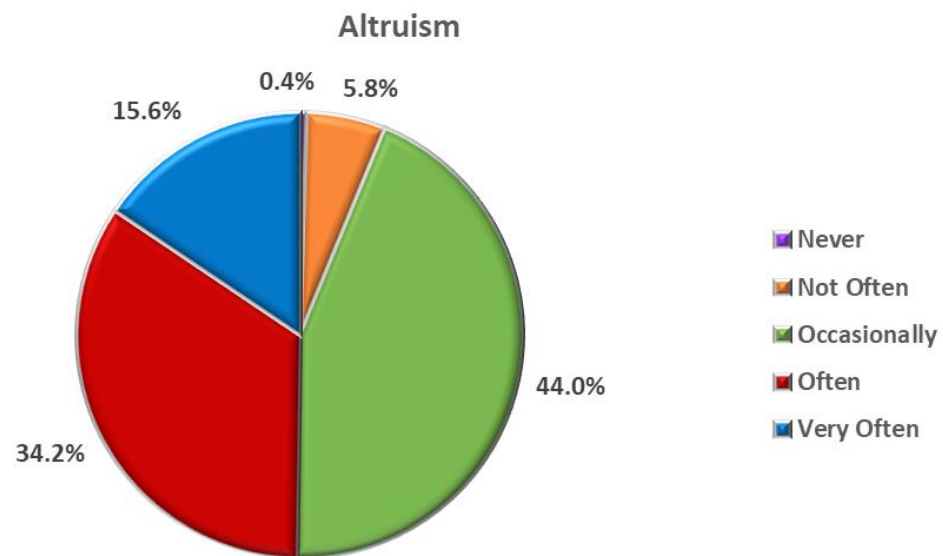


Figure 9: Sample Altruism Characteristics

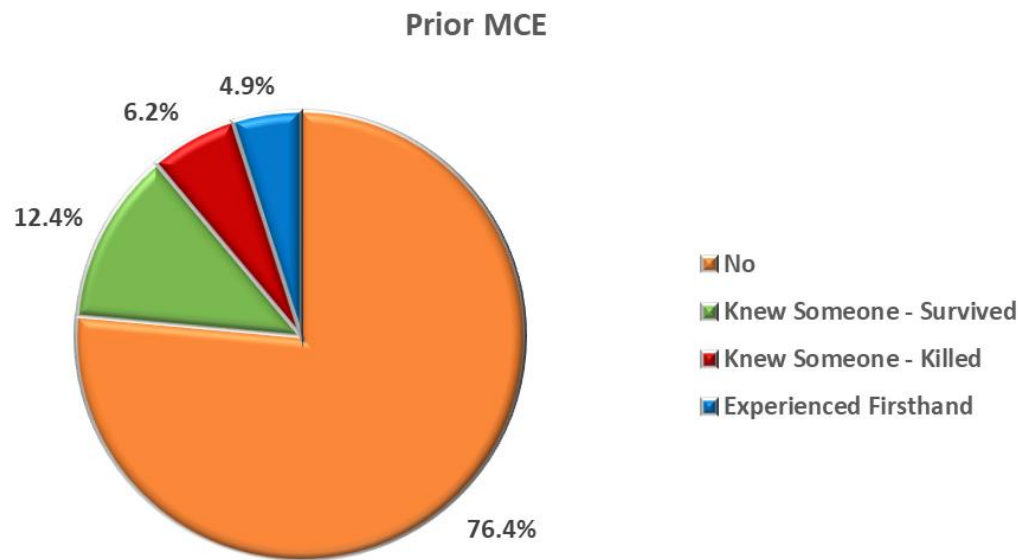


Figure 10: Sample Prior MCE Characteristics

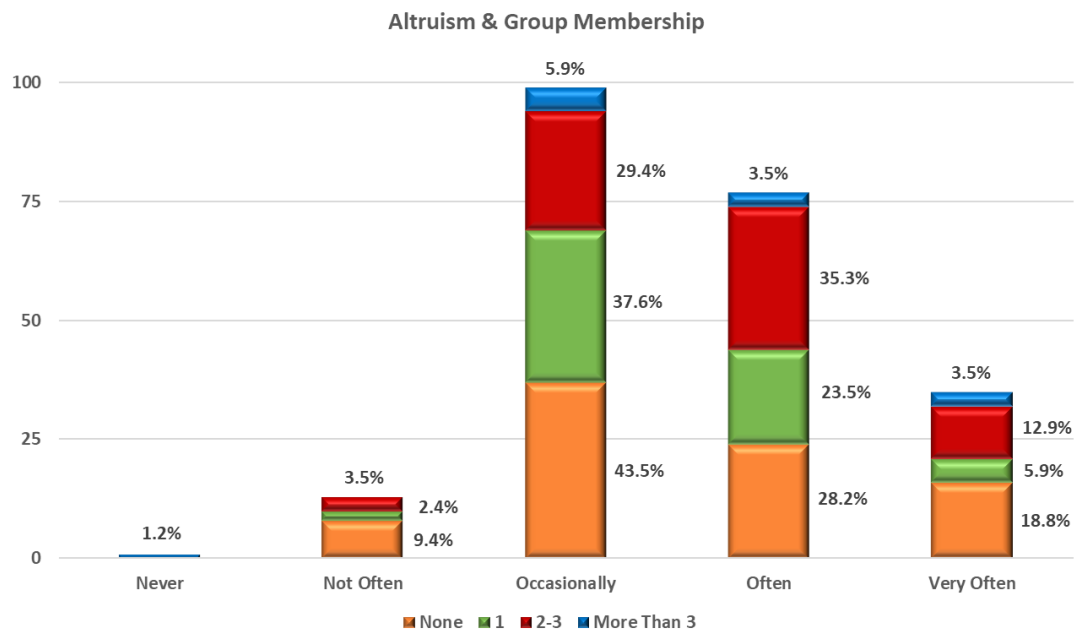


Figure 11: Altruism & Group Membership

Theoretically, the measures of group membership, altruism, and prior mass casualty experience are all important measures and distributions of these traits amongst the general public are not well established. The majority of respondents were involved in groups and behaved altruistically, even at minimum levels (See Figure 8 & 9). As expected, the more altruistic someone is the more it appears they are involved with groups (See Figure 11). More than 75% of respondents had no experience with mass casualty events (See Figure 10). While the occurrence of such events is on the rise, most of those responses are likely military service. In conclusion, while the sample is not, ideal the results will be valid and reliable because of the size, heterogeneous (albeit limited) nature of the sample and the context of the surveys.

Analytical Methods

The first (social media), third (blood donation) and fifth (event participation) variables have binary outcomes, therefore logistic modeling (logit) was utilized. The second (volunteer time) and fourth (monetary donation) and sixth (factor analysis) variables have an integer range, therefore they were run as linear regression (OLS). All tests are two tailed and robust standard errors were used for all modelling. As with any regression based empirical study, it is important to test for collinearity before any models are run. A Pearson's correlation table of descriptive variables revealed that none are collinear enough to warrant an exclusion from the models (See Appendix B.3).

Casualty Number & Demonstrations of Solidarity Results

Based on hypothesis one, respondents who are exposed to higher numbers of fatalities will be more likely to respond with higher levels of demonstrations of solidarity.

Table 3: Casualty Numbers & Demonstrations of Solidarity

	SocialMediaResponse (Logit)			VolunteerTime (OLS)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	-0.122(0.053)**	-0.122(0.053)**	-0.123(0.053)**	0.784(0.583)	0.787(0.583)	0.785(0.583)
Sex	-0.273(0.393)	-0.273(0.394)	-0.273(0.393)	-14.268(6.457)**	-14.210(6.463)**	-14.240(6.458)**
Education	0.358(0.279)	0.359(0.279)	0.360(0.280)	3.521(4.396)	3.501(4.295)	3.509(4.396)
Income	0.071(0.125)	0.071(0.125)	0.070(0.125)	-1.002(2.380)	-0.968(2.380)	-0.985(2.380)
Politics	0.225(0.071)***	0.225(0.071)***	0.225(0.071)***	0.094(1.355)	0.090(1.355)	0.090(1.355)
Religion	0.012(0.333)	0.012(0.334)	0.011(0.333)	-5.599(4.606)	-5.558(4.608)	-5.580(4.605)
Social Capital	-0.422(0.230)*	-0.423(0.230)*	-0.423(0.231)*	9.757(3.393)***	9.757(3.392)***	9.754(3.392)***
Altruism	-0.427(0.254)*	-0.428(0.254)*	-0.429(0.254)*	11.823(3.827)***	11.828(3.825)***	11.820(3.825)***
Prior MCE	0.038(0.253)	0.038(0.253)	0.039(0.253)	-0.328(3.434)	-0.366(3.437)	-0.339(3.430)
Weather	-0.119(0.391)	-0.120(0.391)	-0.122(0.390)	10.320(6.228)	10.270(6.226)	10.235(6.226)
Casualty 2:	-0.646(0.455)	-0.300(0.501)		3.116(7.375)	-3.308(7.659)	
Casualty 6:		0.345(0.485)	0.640(0.458)		-6.618(7.654)	-3.354(7.458)
Casualty 23:	-0.352(0.482)		0.288(0.500)	6.354(7.543)		3.170(7.633)
Cons	2.018(1.667)	1.680(1.674)	1.397(1.739)	-14.526(24.631)	-8.198(25.010)	-11.333(25.307)
Pseudo R ²	0.13	0.13	0.13			
Log PseudoLikelihood	-86.11	-86.12	-86.13			
χ^2	0.006	0.006	0.006			
R ²				0.12	0.12	0.12
F				0.0004	0.0004	0.0004
N	186	186	186	222	222	222
*p<.10; **p<0.05; ***p<0.01						
	BloodDonation (Logit)			MoneyDonations (OLS)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	0.875(0.449)*	0.880(0.448)*	0.879(0.449)*	0.875(0.449)*	0.880(0.448)*	0.879(0.449)*
Sex	-6.170(4.946)	-6.196(4.953)	-6.147(4.954)	-6.170(4.946)	-6.196(4.953)	-6.147(4.954)
Education	-1.137(3.877)	-1.160(3.880)	-1.144(3.879)	-1.137(3.877)	-1.160(3.880)	-1.144(3.879)
Income	0.666(2.061)	0.697(2.053)	0.692(2.060)	0.666(2.061)	0.697(2.053)	0.692(2.060)
Politics	0.270(1.008)	0.270(1.008)	0.275(1.008)	0.270(1.008)	0.270(1.008)	0.275(1.008)
Religion	-4.043(3.703)	-4.026(3.707)	-4.011(3.707)	-4.043(3.703)	-4.026(3.707)	-4.011(3.707)
Social Capital	-2.788(2.640)	-2.776(2.641)	-2.773(2.640)	-2.788(2.640)	-2.776(2.641)	-2.773(2.640)
Altruism	11.247(3.250)***	11.288(3.249)***	11.283(3.250)***	11.247(3.250)***	11.288(3.249)***	11.283(3.250)***
Prior MCE	2.489(2.812)	2.481(2.819)	2.438(2.805)	2.489(2.812)	2.481(2.819)	2.438(2.805)
Weather	-5.343(4.909)	-5.264(4.908)	-5.280(4.903)	-5.343(4.909)	-5.264(4.908)	-5.280(4.903)
Casualty 2:	5.273(5.828)	-1.013(5.841)		5.273(5.828)	-1.013(5.841)	
Casualty 6:		-6.133(6.044)	-4.803(5.924)		-6.133(6.044)	-4.803(5.924)
Casualty 23:	6.611(5.920)		1.660(5.817)	6.611(5.920)		1.660(5.817)
Cons	-0.685(18.579)	5.410(19.513)	4.023(19.382)	-0.685(18.579)	5.410(19.513)	4.023(19.382)
Pseudo R ²	0.05	0.05	0.05			
Log PseudoLikelihood	-132.53	-132.55	-132.51			
χ^2	0.32	0.33	0.32			
R ²				0.13	0.13	0.13
F				0.0001	0.0001	0.0001
N	222	222	222	222	222	222
*p<.10; **p<0.05; ***p<0.01						

	EventParticipation (Logit)			X1F1 (OLS)		
	Model 1	Model 2	Model 3	Model 1	Model 2	Model 3
Age	0.028(0.026)	0.028(0.026)	0.028(0.026)	0.028(0.014)**	0.028(0.014)**	0.028(0.014)**
Sex	-0.442(0.325)	-0.442(0.325)	-0.444(0.325)	-0.252(0.148)*	-0.251(0.149)*	-0.253(0.149)*
Education	0.243(0.215)	0.245(0.215)	0.245(0.215)	-0.070(0.100)	-0.071(0.100)	-0.070(0.100)
Income	-0.224(0.114)**	-0.227(0.114)**	-0.227(0.114)**	0.006(0.054)	0.008(0.054)	0.006(0.054)
Politics	0.059(0.061)	0.059(0.061)	0.059(0.061)	0.017(0.031)	0.017(0.031)	0.017(0.031)
Religion	0.303(0.222)	0.301(0.222)	0.300(0.222)	-0.068(0.115)	-0.067(0.115)	-0.068(0.115)
Social Capital	-0.499(0.165)***	-0.499(0.165)***	-0.500(0.165)***	0.004(0.077)	0.005(0.077)	0.005(0.077)
Altruism	-0.454(0.188)**	-0.456(0.188)**	-0.456(0.188)**	0.380(0.092)***	0.382(0.092)***	0.381(0.091)***
Prior MCE	-0.022(0.170)	-0.022(0.170)	-0.019(0.170)	-0.046(0.081)	-0.048(0.081)	-0.046(0.080)
Weather	0.330(0.305)	0.325(0.304)	0.325(0.304)	0.044(0.142)	0.048(0.142)	0.044(0.142)
Casualty 2:	-0.514(0.365)	0.078(0.384)		-0.019(0.168)	-0.282(0.176)	
Casualty 6:		0.588(0.390)	0.491(0.369)		-0.262(0.181)	0.027(0.170)
Casualty 23:	-0.610(0.383)		-0.115(0.381)	0.270(0.177)		0.293(0.174)*
Cons	1.145(1.198)	0.563(1.242)	0.662(1.228)	-1.401(0.601)**	-1.151(0.614)*	-1.427(0.624)**
Pseudo R ²	0.11	0.11	0.11			
Log PseudoLikelihood	-130.74	-130.86	-130.84			
χ ²	0.0036	0.0037	0.0038			
R ²						
F				0.15	0.15	0.15
N				0.0002	0.0002	0.0002
	222	222	222	186	186	186
*p<.10; **p<0.05; ***p<0.01						
	X1F2 (OLS)					
	Model 1	Model 2	Model 3			
Age	-0.013(0.014)	-0.013(0.014)	-0.013(0.014)			
Sex	-0.043(0.149)	-0.044(0.150)	-0.045(0.149)			
Education	0.106(0.101)	0.107(0.101)	0.107(0.101)			
Income	-0.015(0.055)	-0.017(0.055)	-0.017(0.055)			
Politics	0.090(0.031)***	0.090(0.031)***	0.090(0.031)***			
Religion		-0.002(0.116)	-0.002(0.116)			
Social Capital	-0.212(0.078)***	-0.213(0.078)***	-0.212(0.078)***			
Altruism	-0.185(0.092)**	-0.186(0.092)**	-0.186(0.092)**			
Prior MCE	0.059(0.081)	0.060(0.081)	0.061(0.081)			
Weather	-0.021(0.143)	-0.024(0.143)	-0.025(0.143)			
Casualty 2:	-0.266(0.169)	-0.013(0.177)				
Casualty 6:		0.255(0.182)	0.263(0.171)			
Casualty 23:	-0.257(0.178)		0.002(0.175)			
Cons	0.787(0.604)	0.545(0.617)	0.540(0.628)			
Pseudo R ²						
Log PseudoLikelihood						
χ ²						
R ²	0.16	0.16	0.16			
F	0.000	0.000	0.000			
N	186	186	186			
*p<.10; **p<0.05; ***p<0.01						

While these results do not support the hypothesis there are some observations to take away. The only instance of a casualty number being significant is in Model 3 of X1F1 where individuals who received a mass casualty event where 23 people were killed responded with higher demonstrations of solidarity than those who received an event where 6 people were killed.

Model 1 and Model 2 within the X1F1 modeling indicates that those who received an event where 23 people were killed responded with higher demonstrations of solidarity, however, it is not at a significant level. The relationships between casualty numbers and dependent variables are insignificant across all other demonstrations of solidarity, however some of the results are in a positive and theoretically supported direction, but not at the 90% confidence interval level. For example, the relationship between high casualty count and volunteer time, blood donation and money donation are in a positive direction, however, not at the minimum 90% confidence interval level needed to claim a significant relationship. The relationship between casualty 23 and volunteer time, blood donation, money donations and X1F1 is more positive than the relationship between those dependent variables and lesser casualty counts, however, it does not reach the minimum levels for significance. As stated, the directionality of the relationship is not incorrect, however, without a significant relationship of at least at the 90% confidence interval, we are forced to accept the null hypothesis that casualty number does not affect the demonstrations of solidarity that follow a mass casualty event.

Results indicate that younger people are more likely to use social media to respond to a mass casualty event as well as more politically conservative individuals. Older individuals were found to be more likely to donate blood and money. Male respondents were more likely to respond by volunteering their time. The relationships between the dependent variables and social capital and altruism are significant across multiple demonstrations of solidarity.

The relationship between group membership and social media, time donations, event participation and X1F2 variables is significant. That significant relationship is in a negative direction across social media, event participation and X1F2 and positive with time. Group

membership relationship with social media is something that has not been explored but the nature of group membership is civic participation so the negative relationship with event participation is puzzling. The positive significant relationship with time is confirmatory with the aforementioned theory as individuals who are involved in more groups will be more likely to participate in demonstrations of solidarity, in this case by volunteering time.

The relationship between altruism is significant across all seven of the dependent variables; in a positive direction with time, blood, money and X1F1 and in a negative direction with social media, event participation and X1F2. The rationale of altruistic individuals not responding via social media and through event participation is understandable because our altruistic measure (and survey based altruistic measures in general) gets at more actual helping behaviors and not symbolic ones as in these variables. The positive and significant relationship between altruism and volunteering time, blood and money donation are in line with the aforementioned theory stating that altruistic individuals would be more likely to participate in demonstrations of solidarity.

Event Type & Demonstrations of Solidarity Results

According to hypothesis two, respondents who are exposed to nonviolent events are more likely to respond in lower levels of solidarity while respondents to violent events are more likely to answer with higher levels of solidarity. Additionally, hypothesis 2a suggests that demonstrations of solidarity will be stronger following terrorist events than any other event type.

Table 4: Event Type & Demonstrations of Solidarity

	SocialMediaResponse (Logit)		VolunteerTime (OLS)		BloodDonations (Logit)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	-0.034(0.040)	-0.034(0.040)	0.522(0.604)	0.522(0.604)	0.073(0.036)**	0.073(0.036)**
Sex	-0.383(0.365)	-0.383(0.365)	-9.543(6.177)	-9.543(6.177)	0.062(0.315)	0.062(0.315)
Education	0.026(0.256)	0.026(0.256)	0.242(3.910)	0.242(3.910)	-0.541(0.228)**	-0.541(0.228)**
Income	-0.078(0.143)	-0.078(0.143)	-1.745(2.749)	-1.745(2.749)	0.083(0.123)	0.083(0.123)
Politics	0.127(0.077)*	0.127(0.077)*	-0.543(1.327)	-0.543(1.327)	0.061(0.067)	0.061(0.067)
Religion	0.001(0.269)	0.001(0.269)	-6.336(3.688)*	-6.336(3.688)*	-0.304(0.220)	-0.304(0.220)
Social Capital	-0.199(0.193)	-0.199(0.193)	9.781(3.306)***	9.781(3.306)***	-0.203(0.165)	-0.203(0.165)
Altruism	-0.257(0.224)	-0.257(0.224)	7.807(3.467)**	7.807(3.467)**	0.476(0.192)**	0.476(0.192)**
Prior MCE	-0.037(0.203)	-0.037(0.203)	4.879(3.053)	4.879(3.053)	-0.060(0.171)	-0.060(0.171)
Weather	-0.978(0.519)*		27.928(8.517)***		1.049(0.425)**	
Terrorism	-0.459(0.486)	0.520(0.532)	13.623(8.960)	-14.305(8.766)	1.295(0.432)***	0.246(0.434)
Accident		0.978(0.519)*		-27.928(8.517)***		-1.049(0.425)**
Crime	-0.047(0.461)	0.932(0.516)*	-6.696(8.179)	-34.625(7.975)***	0.682(0.418)	-0.367(0.424)
Cons	1.516(1.599)	0.538(1.602)	0.700(24.128)	28.628(25.042)	-1.223(1.291)	-0.174(1.299)
Pseudo R ²	0.06	0.06			0.10	0.10
Log PseudoLikelihood	-101.05	-101.05			-131.08	-131.08
χ ²	0.13	0.13			0.002	0.002
R ²			0.12	0.12		
F			0.000	0.000		
N	187	187	222	222	222	222
*p<.10; **p<0.05; ***p<0.01						
	MoneyDonations (OLS)		EventParticipation (Logit)		X2F (OLS)	
	Model 1	Model 2	Model 1	Model 2	Model 1	Model 2
Age	0.493(0.452)	0.493(0.452)	0.033(0.029)	0.033(0.029)	0.014(0.013)	0.014(0.013)
Sex	-9.903(4.983)**	-9.903(4.983)**	-0.425(0.314)	-0.425(0.314)	-0.099(0.146)	-0.099(0.146)
Education	1.368(3.877)	1.368(3.877)	0.094(0.215)	0.094(0.215)	-0.066(0.099)	-0.066(0.099)
Income	1.554(2.040)	1.554(2.040)	-0.091(0.122)	-0.091(0.122)	0.025(0.051)	0.025(0.051)
Politics	-0.748(1.015)	-0.748(1.015)	0.127(0.068)*	0.127(0.068)*	-0.061(0.030)**	-0.061(0.030)**
Religion	-6.180(3.187)*	-6.180(3.187)*	0.171(0.217)	0.171(0.217)	-0.069(0.109)	-0.069(0.109)
Social Capital	-1.479(2.634)	-1.479(2.634)	-0.476(0.171)***	-0.476(0.171)***	0.106(0.075)	0.106(0.075)
Altruism	9.343(3.102)***	9.343(3.102)***	-0.540(0.192)***	-0.540(0.192)***	0.293(0.088)***	0.293(0.088)***
Prior MCE	5.044(2.671)*	5.044(2.671)*	-0.077(0.171)	-0.077(0.171)	0.048(0.077)	0.048(0.077)
Weather	6.109(6.855)		-0.410(0.426)		0.526(0.193)***	
Terrorism	3.620(6.972)	-2.489(6.675)	-0.743(0.434)*	-0.332(0.435)	0.459(0.197)**	-0.067(0.194)
Accident		-6.109(6.855)		0.410(0.426)		-0.526(0.193)***
Crime	-6.592(6.767)	-12.701(6.579)*	-0.151(0.420)	0.259(0.422)	0.059(0.194)	-0.467(0.192)**
Cons	8.788(19.118)	14.897(19.321)	1.669(1.233)	1.258(1.241)	-1.209(0.612)**	-0.683(0.607)
Pseudo R ²			0.11	0.11		
Log PseudoLikelihood			-130.73	-130.73		
χ ²			0.0004	0.0004		
R ²	0.13	0.13			0.13	0.13
F	0.000	0.000			0.0001	0.0001
N	222	222	222	222	189	189
*p<.10; **p<0.05; ***p<0.01						

Again results are not strongly supported, however, different event types are drawing different reactions. The relationship between terrorism and blood donations and the X2F variables is positive and significant. The relationship between criminal events and social media responses is also positive and significant, however, accidents have a stronger significance. The

relationship between terrorism and monetary and time donations is positive, but the relationship between these variables is more significant with weather events. The relationship between crime is also positive but at an insignificant level.

An important observation from this experiment is that weather events tend to draw the strongest reaction from respondents and their tendencies to participate in demonstrations. A reason behind that may be that weather events are the most common and are the most unavoidable. For example, Americans have been found to fear natural disasters significantly more than other types of disasters (YouGov 2019). In parallel, terrorist events also drew a strong reaction from the community. This may be due to the rarity of such events, along with the shocking nature and publicity that surrounds terrorist events when they do occur. The perceptions and facts regarding crime in the United States is often very different. For example, in a late 2016 survey, 57% of respondents claimed that crime had gotten worse since 2008, though data shows that both violent and property crimes have decreased significantly since the mid-1990s (Gramlich 2016). Crime (or at least its perceptions) are also often relegated to certain lower socio-economic areas and people. Additionally, many people do not believe that crime will happen to them, let alone a violent criminal event. Another observation is that each type of mass casualty event draws a different response from the community in which they occur and generalizing and classifying events (such as violent and nonviolent events) could lead to confusing and misinterpreted results. It would be more empirically beneficial to study each event type within its own context in order to better understand the processes that occur within a community after such an event occurs.

Politically conservative respondents were found to be more likely to use social media to respond to a mass casualty event as well as participate in events related to a mass casualty event. Less religious respondents were also found to be more likely to donate both money and time. Older people were again more likely to donate blood, as well as the less educated. Altruism and social capital are again significant with many of the variables.

The relationship between group membership and time donations is significant in a positive direction and insignificant in regards to event participation (same as the Experiment 1 results). The relationship between altruism is again positive and significant in terms of volunteering time, donating blood, donating money and with the factor analysis while negatively significant with the event participation variable (synonymous with the Experiment 1 results).

Victim Type & Demonstrations of Solidarity Results

Hypothesis 3 suggests that when vulnerable groups are the victims of mass casualty events, then more demonstrations of solidarity will happen.

Table 5: Victim Type & Demonstrations of Solidarity

	Social MediaResponse (Logit)	VolunteerTime (OLS)	BloodDonations (Logit)	MoneyDonations (OLS)	EventParticipation (Logit)	X3F (OLS)
Age	-0.055(0.037)	0.372(0.613)	0.089(0.036)**	0.799(0.512)	0.036(0.029)	0.018(0.013)
Sex	0.021(0.339)	-12.734(6.512)*	-0.119(0.315)	-7.475(5.157)	-0.051(0.310)	-0.203(0.147)
Education	0.075(0.237)	0.302(4.225)	-0.547(0.233)**	1.640(3.957)	-0.041(0.213)	-0.068(0.100)
Income	0.021(0.126)	-0.361(3.055)	-0.040(0.122)	1.258(2.311)	0.001(0.117)	-0.001(0.052)
Politics	0.155(0.072)**	0.945(1.402)	0.054(0.067)	-0.009(1.102)	0.144(0.067)**	-0.056(0.030)*
Religion	0.075(0.253)	-6.919(4.150)*	-0.270(0.232)	-9.935(3.395)***	0.019(0.223)	-0.086(0.111)
Social Capital	-0.076(0.179)	4.622(3.475)	-0.358(0.168)**	-2.697(2.885)	-0.476(0.169)***	0.027(0.076)
Altruism	-0.430(0.209)**	9.868(3.932)**	0.704(0.200)***	9.300(3.258)***	-0.590(0.191)***	0.330(0.089)***
Prior MCE	0.032(0.187)	1.716(3.539)	-0.158(0.169)	4.603(2.991)	-0.032(0.169)	-0.018(0.078)
Crime	-0.112(0.327)	-10.943(6.338)*	-0.252(0.309)	-9.270(5.081)**	0.446(0.302)	-0.220(0.141)
Vulnerable	-0.459(0.335)	10.824(6.067)*	0.347(0.309)	14.077(5.014)***	-0.216(0.305)	0.345(0.143)**
Cons	1.411(1.423)	11.858(26.244)	-0.679(1.273)	2.389(19.208)	1.261(1.180)	-0.756(0.598)
Pseudo R ²	0.07		0.10		0.11	
Log PseudoLikelihood	-114.56		-130.34		-132.97	
χ^2	0.13		0.002		0.0003	
R ²		0.09		0.17		0.16
F		0.0022		0.000		0.000
N	189	222	222	222	222	189

*p<.10; **p<0.05; ***p<0.01

Results from Experiment 3 are supported in three of the demonstrations of solidarity as the presence of a vulnerable victim population has a positive and significant relationship with time and money donations and with the X3F variables. That relationship between vulnerable victim populations and time donations is at the 90% confidence interval, 99% confidence interval with the money variable and at the 95% confidence interval for the factor analysis variable. However, the presence of a vulnerable victim group has no effect on other demonstrations of solidarity measured and is negatively associated in terms of social media response as well as event participation.

Politically conservative respondents are again more likely to respond to a mass casualty event using social media and by participating in events related to the mass casualty incident. Less

religious people are again more likely to demonstrate solidarity by volunteering their time or money. Older people are again more likely to donate blood, as well as the less educated.

The relationships between group membership and altruism and the dependent variable are again significant. The relationship between social capital and blood donations and event participation is negative and significant, synonymous with results from the previous experiments conducted. Altruism is again negatively associated with social media response and event participation while it has a positive and significant relationship with both the time, money and Factor Analysis variables.

Analysis

While none of these results unanimously support the hypotheses proposed, there are some important conclusions that can be made. The first conclusion is that the consistency of the results regarding the first nine variables, that are common amongst all three experiments, adds to the validity and reliability of the results. Results table 5 shows the significance of some of the consistent findings across the different experiments, all at the minimum 90% confidence interval level or higher.

Table 6: Cross Experiment Consistency Test

	SocialMediaResponse			VolunteerTime			BloodDonations			MoneyDonations			EventParticipation		
	X1	X2	X3	X1	X2	X3	X1	X2	X3	X1	X2	X3	X1	X2	X3
Age	-						+	+	+	+					
Sex				-		-					-				
Education							-	-	-						
Income													-		
Politics	+	+	+											+	+
Religion					-	-					-	-			
Group Membership	-			+	+				-				-	-	-
Altruism	-		-	+	+	+	+	+		+	+	+	-	-	-
Prior MCE											+				

The significance and direction of some of these relationships also adds to the discussion. For example, the finding that older people are more likely to give blood makes logical sense as older individuals often are physically unable to participate in other demonstrations of solidarity. Older people are also less involved in social media (which is consistent with H1 results) and often have the means to contribute financially to different charitable causes (consistent with H1 results). Gender related findings are contrary to previous findings that found that women were more likely to participate in voluntary charity (Helms and McKenzie 2013; Mesch et al. 2006; Andreoni and Vesterlund 2001). Though previous empirical findings have found that politically conservative people report higher levels of charitable giving, politically conservative indicators were only significant in social media and event participation. This a considerably different method of demonstrating solidarity than traditional giving like volunteering or donating money (Paarlberg et al. 2018). Findings regarding religion are in line with previous findings that religiously affiliated individuals gave more (both time and money) than nonreligious individuals (Hagood 2016), but only when those causes were religious in nature (Wang and Graddy 2008). The response to a mass casualty event is not likely to satisfy that need for a religious person, unless, the victim group is religious in nature (which is in line with Hypothesis 3).

The rationale for group membership and altruistic behavior positively affecting demonstrations of solidarity has already been discussed within this paper. The clearest results in support of those previous findings is the positive and significant relationship between volunteer time, group membership and altruism. The positive and significant relationship between volunteer time and group membership makes logical sense as individuals who have institutional involvement will have more of an opportunity to volunteer their time. These findings are in line

with previous findings that demonstrate a relationship between formal volunteering and informal helping through social networks (Gallagher 1994; Wilson and Musick 1997). Volunteering time is perhaps the most altruistic of all the demonstrations of solidarity measured so it is no surprise that a positive and significant relationship exists between altruism and volunteering time. Altruism is a strong positive indicator in blood donations, consistent with previous findings (Steele et al. 2008). Monetary donation is also significant while group membership has an insignificant relationship with these variables. Volunteering and monetary donations garnered similar responses, akin to previous findings (Lee, Piliavin, Call 1999).

The negative but significant relationship between altruism, group membership and social media usage is a relatively unexplored topic, but rationale for a negative relationship exists. A negative relationship exists between social media response and group participation across all experiments (though only significant in Experiment 1). These findings are supportive of the “slacktivist” concept in that social media usage does not require group participation (though many civic groups exist on social media). Altruistic behavior deals more with actual helping behaviors and not necessarily symbolic ones, like a social media response would be. The significant negative relationship between group membership, altruism and event participation is contrary to logic, but can be explained. For example, those involved in groups would logically participate in events, however, the event participation variable does not consider who is organizing the event. If that event organization was controlled for (and the respondent’s affiliations were organizing) then the negative relationship currently showing for group membership would likely flip to a positive one. Again, altruistic behavior deals mostly with actual helping behaviors captured by the significant positive relationships captured for time,

blood and money. Though demonstrating solidarity through event participation requires more effort than a social media response, these demonstrations are still largely symbolic.

Event Type Examination

The only hypothesis tested across all the experiments was regarding violent event types vs. nonviolent ones and tested specifically through Experiment 2. Event type is completely insignificant in Experiment 1 where respondents received either a weather or terrorism event. Event type is significant in Experiment 3 where accidents had a stronger relationship with demonstrations of solidarity than criminal events. As mentioned before, the mixed results from the testing of this hypothesis suggests that violent events do garner strong demonstrations of solidarity, but under certain circumstances. Those circumstances remain unknown though variables such as blame, frequency of each event type (ala Rasanen et al. 2014 results) and media coverage of other events are likely to impact individuals within a community where a mass casualty event had just occurred. Theoretically terrorist and criminal events were assumed to be similar, but results suggest that they are very different. For example, previous experimental results found that extremity and severity of violence was important, along with the motivation for the incident and social categorization of the actor (Huff and Kertzer 2016). Importantly, they specifically highlighted the language used to described violent incidents as an important factor in how the public classifies an event as terrorism or not. However, such inconsistent results forces acceptance of the null hypothesis regarding hypothesis 2/2a must be accepted. Further empirical research into each event type and how they affect individuals at both the individual and

community levels is something that is needed before any logical claim regarding event type could be made.

Conclusion

An important lesson taken from these results is the mostly unexplored differences between different types of demonstrations of solidarity. Previous research suggests that blood and money donors receive greater anonymity, while time donors participate in person with those in need and requires more initiative (Lee, Piliavin and Call 1999). Additionally, which demonstrations are related? For example, social gatherings to commemorate victims reinforces compassion and sympathy for victims and the gravity of an event and positively affects volunteering to relief efforts (Jasper 1997, 1998; Wuthnow 1991). More empirical research is needed to examine how a mass casualty event affects psychological factors behind giving behaviors as a demonstration of solidarity. A larger and more representative sample would be able to better explore the relationships between demographics and demonstrations of solidarity as the limited college student sample is unable to elaborate on these relationships. Though younger people make up an important part of a community, college students often have limited life experiences. However these results are intriguing and empirically promising.

Results from Experiment 1 (testing Hypothesis 1) support the null hypothesis as casualty count does not seem to affect the demonstrations of solidarity that follow. However, the results using the X1F1 variable suggest that a higher casualty count has a somewhat positive and significant relationship with volunteering time and blood and monetary donations (though not individually). As the definition of a mass casualty event is usually vague and abstract in nature (as previously discussed), perhaps these results can be interpreted to suggest that psychologically

a mass casualty event requires a much higher number of casualties to signal a need within the community, which would draw a response (in the form of demonstrations of solidarity).

Violent events (specifically terrorism) is a significant indicator of whether an individual will donate blood or not, however, the mixed responses across all the dependent variables suggest that each event type is truly unique regardless of violence or not. Therefore, a further examination into how different event types are perceived by individuals is needed along with how they impact a community. However, this is support for hypothesis 2a that terrorist events will lead to more demonstrations of solidarity.

Results from Experiment 3 (testing Hypothesis 3) suggest that the presence of traditionally vulnerable victim groups was a significant and positive indicator of both time and money donations along with the X3F variables. These results suggest that the presence of a vulnerable victim group will indeed cause more demonstrations of solidarity. However, it is important to recognize that psychologically deciding whether a victim is vulnerable or not occurs at the individual level, though traditionally vulnerable groups (children, elderly etc.) are interpreted by the majority of people as being vulnerable. Other, socially vulnerable groups may be interpreted as vulnerable by individuals who share common traits with that group (or who are merely sympathetic) and thus more demonstrations of solidarity will occur. For example, the 2016 terrorist attack at the gay nightclub Pulse likely caused more demonstrations of solidarity by LGBT individuals and those sympathetic to the LGBT community. In contrast, individuals who are not sympathetic would behave normally in their post-event demonstrations while individuals who carried an anti-LGBT mindset likely did not demonstrate or participated in victim blaming. For example, Kogut (2011) found that if an individual is believed to be

responsible for their plight then people are less likely to offer help. These results regarding vulnerable victim groups is intriguing and suggests that framing mass casualty event victims to be more sympathetically appealing (more so than simply being a victim) could lead to stronger demonstrations of solidarity.

CHAPTER 5: QUALITATIVE APPROACH

This section seeks to examine how casualty numbers, the presence of a vulnerable victim group and institutional presence affects the demonstrations of solidarity that follow a mass casualty event. Three hypotheses are tested across two case studies. The hypotheses tested are:

1. *higher casualty events increase the likelihood of more demonstrations of solidarity*
3. *events that harm victims who are perceived as vulnerable will generate more demonstrations of solidarity.*
4. *victim communities that have a higher level of institutionalization will have more demonstrations of solidarity following a mass casualty event.*
 - a. *A strong response from government institution leaders will lead to more demonstrations of solidarity.*
 - b. *A strong specific institutional response will lead to more demonstrations of solidarity.*

Case study methods like those used here are useful because they can be exceptionally detailed on variables of interest and allow process tracing. The use of case studies is essential for description and is fundamental to social science (King, Keohane and Verba 1993). The use of qualitative methods is common in previous studies involving the reactions to mass casualty events. Gal (2014) used a single case study of Israel during the Second Intifada (September 2000 to early 2004) to show that Israeli reaction became normative in the sense that the public reacted immediately to the event (terrorist in this instance), took measures to protect itself, and then returned quickly to its normal routines. Carroll et al. (2005) used case studies on three separate

towns in Arizona affected by fires in 2002 to show that cohesion and conflict was evident based on the individual perceptions of those that did not evacuate.

This chapter consists of seven different sections. The first section discusses case selection and data. The second section primarily discusses the independent and control variables of interest. These variables are measured through the use of primary source material regarding the casualty number for each event, the victim group and community institutionalization. The fourth section operationalizes the demonstrations of solidarity examined within the case studies. The fifth and six sections are the case studies; the *Pulse terrorist attack in Orlando, Florida in the Summer of 2016* and the *San Bernardino terrorist attack in the Winter of 2015*. The seventh section is an analysis of the findings from both case studies. Within this final section is also an application of the findings and a discussion of other unaccounted for variables that could play an impact.

Case Selection

Ideally, a most similar case method where variation only existed on the variable of interest would be used. However, since the unit of analysis is the community in which the event occurred, a true most similar method would be difficult to execute because of the wide range of independent variable values and the limited number of cases to choose from. Therefore, there is variation on the number of casualties (to test Hypothesis 1), victim type (to test Hypothesis 3) and institutionalization of the victim community (to test Hypothesis 4/4a/4b).

Table 7: Case Comparisons

	Similarities	Differences
Community Traits	Ethnic Makeup	Economic Makeup Poverty Unemployment Median Household Income GDP/Capita Crime Levels
Facts of the Event	Mass Casualty Events Terrorism Attackers Pledged Allegiance to ISIS Use of Firearms Most Casualties since 9/11 at time Events Lasted about 3 Hours Suspects Killed by Local Law Enforcement	Number of Dead (49/14)* Type of Victims (LGBT/Govt.)* Institutionalization of Victim Community* Number of Shooters
Post Event Response	Few Related Prosecutions Consulted Kenneth Feinberg Federal Response for Terrorism Investigation	Amount of Money Raised** Gatherings/Vigils** Donations**
		*Denotes Independent Variables **Denotes Dependent Variables

These cases are similar in that they were acts of terrorism carried out by radicalized extremists who were apparently sympathetic to the Islamic State. Each incident qualifies as a mass casualty event based on the total number of dead; 49 in Orlando and 14 in San Bernardino. Each incident was the largest terrorism-based mass casualty event since the September 11th terrorist attacks when they occurred. Each incident lasted a short amount of time and individuals associated with the suspects in both cases were later prosecuted. In both cases, the perpetrators were killed on site by local law enforcement and the FBI became involved later to investigate these acts of terrorism.

Every community and every mass casualty event are unique and though event types or casualty numbers may be similar there are likely other factors that exist within a community that impact the response to such a traumatic event. The three main differences between these cases are in line with the aforementioned hypotheses. First, the casualty numbers differ; Orlando had

49 fatalities while San Bernardino had 14. Second, is the extent to which the victims were perceived as vulnerable. The victims in the Orlando case are generally associated with the LGBT community, a group many people see as vulnerable. The victims in the San Bernardino case were local government workers, a group not generally seen as vulnerable. Third, is the level of institutionalization within those victim groups. Institutionalization includes governmental support of demonstrations, the involvement of non-profit groups and local businesses and specific institutions (related to the victim group) in demonstrations of solidarity.

There are strong differences between Orlando and San Bernardino and both areas have different histories and economies. Orlando's economy is reliant on tourism and hospitality in addition to a growing technology sector, and as a result the area is economically better off than San Bernardino. Economically, poverty and unemployment are lower and median household income and gross domestic product per capita are higher in Orlando than San Bernardino (US Census Bureau 2019). Crime is higher in San Bernardino than Orlando (FBI UCR 2019). While both events had an initially strong media response, the victim type inclusion was most prominent in the narrative in the Orlando case. The added variation makes it more complicated to draw inferences in examining these two cases. The two communities responded differently to the mass casualty events that occurred. The Orlando community responded strongly with large and frequent demonstrations of solidarity with the victims, whereas the San Bernardino community response was limited.

Methodology

Hypothesis 2 is not tested because both events were violent, terrorist events. One key source of information used in both cases are after action reports from the Community Oriented

Policing office within the National Institute of Justice.¹⁶ Media sources, preferably local news sources were used because they were much more thorough and consistent in their reporting. Though national news sources were used, local news sources were able to cover smaller demonstrations that are often overlooked by after action reports and national media sources, such as material (non-monetary) donations.

Case Structure

Each case is broken down into six sections. First, the cases begin with the facts of each event, drawn mainly from after action reports. Second, the area in which the event occurred is described using publicly available information describing the economy and other aspects of each community. The third section discusses the independent variables for each case; casualty number, victim vulnerability (using primarily historical, legal and survey data) and community institutionalization. The fourth section discusses the media's role in each event is described, including how the victim group and casualty number is included or not in coverage. The fifth section covers the demonstrations of solidarity (dependent variable) that occurred following each event, supported by the interviews. The sixth and final section is concluding thoughts regarding each case, including which hypotheses there is supportive evidence for.

Author Bias

I have lived in the Central Florida area for more than twenty years. Within that time, I earned both Bachelor's and Masters' degrees in Criminal Justice from the University of Central Florida. I have been trained in qualitative methods, including the use of interviews in providing

¹⁶ NIJ/COPS after action reports include hundreds of hours of interviews with numerous individuals involved with each case, including first responders and community leaders.

empirical evidence. Additionally, I have been a sworn Deputy Sheriff with the Orange County Sheriff's Office for more than five years. In that position, I regularly interview people from a variety of different diverse backgrounds. The fact that I am a law enforcement officer was not provided to anybody that I interviewed prior to interview. I acknowledge any subliminal bias I may have as a white male approaching these topics from an academic background, but no bias was intentional.

As a law enforcement officer, I responded to the Pulse shooting on the morning of June 12th and observed the aftermath of such a traumatic event upon the community. That event, in many ways, inspired this project. This project and the interviews I conducted added into a greater understanding of how individual communities respond to mass casualty events. Results have suggested that the motivations to demonstrate solidarity depend on the individual and the types of demonstrations available. Communities respond differently based on a variety of different factors, most importantly the institutional response they receive.

A triangulation method was used on the data in order to eliminate potential biases. Data came from many different sources including interviews, primary sources including local and national media, and secondary sources including academic and government data. While I was familiar with the general community response to Pulse, I did not have any substantial interactions with any of the organizations whose members I interviewed. Therefore, I relied heavily on media sources in guiding who was contacted for an interview for both cases.

Interviews

A total of 28 individuals who were active in either the Orlando or San Bernardino communities following the mass casualty events were contacted via email for an interview.¹⁷ I contacted 19 different individuals related to the San Bernardino case. I was only able to interview 6 people related to that case as the response rate was low. I contacted 9 individuals related to the Orlando case and was able to interview 7 people. I also interviewed a representative from the law offices of Ken Feinberg, a victim fund expert. Mr. Feinberg is a well-known compensation attorney who provided similar services to affected communities following the Boston bombing, Virginia Tech shooting, Aurora theater shooting and the BP oil spill in addition to the September 11th attacks (Barkan 2016). Every person interviewed was with their respective organization when the mass casualty event occurred.

Of those contacted, 14 total interviews were completed for a response rate of 50%. Contact information for interviewees was readily available through internet-based sources. Interviews were conducted either face to face or over the phone between April 23 and June 24 2019. Each interview lasted approximately 40 minutes and was semi-structured with open ended questioning. Initial questioning followed the “grand tour” model to understand the organizations typical role within the community (Spradley 1979). Immediately after, a follow up question was posed along the “specific” grand tour model in order to focus specifically on the event (Spradley 1979). The interview questions focused upon the role the organization has within the community, the impact the event had upon the community, and the role the organization had following the

¹⁷ See Appendix C.1 and C.2 for Qualitative IRB documents

event.¹⁸ Additional questions were focused on inter-institutional collaborations, the participants personal experiences and perceptions following the event. Semi-structured interviews allow participants to speak freely and for the interviewer to modify questioning based on the direction the interview is going.

Detailed notes were taken for each interview. Those interviews were crucial in providing an “on the ground” perspective as all the interviewees played important roles in the community following the mass casualty events. Additionally, participants were able to provide information on demonstrations of solidarity that occurred. They provided contextual information on the roles the victim type, community institutions, and casualty numbers played along with other control variables that they believe influenced the community response.

Data Analysis

As a theory was already in place to describe community behavior following a mass casualty event, the method used was more akin to an inductive/scientific method. Once cases were selected, data points began to be gathered and verified through different sources. Due to the expected limited interview response, contact was attempted with as many different people involved in the community response as possible. Analysis of the interviews focused on phrases and ideas being conveyed that refer to organizational response specific to the individual being interviewed. Additionally, the perceptions of other institutional and community involvement in demonstrations of solidarity, perceptions of how facts of an event motivated community response, and how response to the event could have been improved were all topics covered throughout the interviews. Analysis of demonstrations of solidarity, both from interviews and

¹⁸ See Appendix C.3 for Interview Questions.

other sources, were coded in context of the community in which the event occurred.¹⁹ When possible, claims made during interviews were corroborated through neutral media sources. Any claims made during the interviews that were contradictory with media sources were confronted during the interviews.

Independent Variable: Casualties

In order to test hypothesis 1, the casualty number for each case was compared across an original database covering all mass casualty events that occurred in the United States from 2000-2016 (See Appendix A). In order to code each event, the average was taken of all violent events prior to the event being examined. If the average is lower than the casualty number for the event being examined, then the event is coded as high and if the average is higher than the event being examined then the event is coded as low. Additionally, the casualty number was specifically focused upon in media reports and when conducting interviews with those involved with demonstrations within each community. Everyone who was interviewed was asked if they believed the number of fatalities affected the community's response. Though both cases qualify as mass casualty events, there is a significant difference in the 49 deaths in the Orlando case to the 14 deaths in the San Bernardino case.

Independent Variable: Victim Type

In order to test hypothesis 3, that vulnerable victims elicit more support than victims who are not perceived as vulnerable, primary sources were used to gather information about the nature of the victim class. While traditionally vulnerable victims were used in the experiment,

¹⁹ Inductive and deductive approaches were used to code interview responses. Both open and axial coding was used (Corbin and Strauss 1990).

this instance of testing hypothesis 3 is focused on socially vulnerable victims. In order for a group to be considered socially vulnerable they must have a history of marginalization and be perceived by others as vulnerable. These groups must be common and identifiable enough of a victim type to be sympathetic to rest of the community. Identity group factors such as general legal protections, anti-discrimination policies and the targeting of each group in crimes provide insight into whether a group may be perceived as vulnerable or not. Non-vulnerable victim groups may not have legal protections in place because there is not a need and these groups often do not have a history of marginalization. They are not sympathetic enough to warrant an increase in concern if they are targeted and there are no societal protections in place to protect groups that are not seen as vulnerable. Non-vulnerable groups may have a weak institutional structure and rely on other institutions for support. In addition to primary source material, leaders within the LGBT community in Orlando and the representatives of the workers in San Bernardino were interviewed in order to ascertain how the roles each sub-community played in demonstrations of solidarity.

Independent Variable: Institutionalization

In order to test hypothesis 4, 4a and 4b, each case is analyzed regarding government leadership and institutional involvement in demonstrations of solidarity. This information comes from primary sources and from community leaders who were interviewed. Representatives from government, non-profit, business/economic and specific institutions within the communities were interviewed in order to ascertain the effects of institutional involvement in demonstrations of solidarity. Government institutions are coded as such if they are a part of the government. Strong government institutional leadership is coded as such if members of the local or state

government appear frequently in media related to the event. These appearances are most often because government leadership is involved with demonstrations of solidarity either directly (ex. speaking to a crowd during a memorialization) or indirectly (speaking to the media regarding community needs). Non-profit institutions are coded as such if they are a non-government institution that does not make money from its actions. Examples of non-profit institutions that were interviewed are blood donation organizations. Specific institutions are coded as such if they were founded to serve a specific community. Examples of specific institutions interviewed include LGBT organizations in Orlando and the workers union in San Bernardino. High institutionalization of a victim community is characterized by multiple institutions being active within the victim community. Additionally, high institutionalization is characterized by numerous and effective collaborations between institutional types. These active institutions must be able to organize demonstrations of solidarity for the general community not just the specific community that was struck. Low institutionalization is characterized by either primarily individual involvement with organization of demonstrations or an institutional response by a few groups. Institutions that are unwilling (or unable) to organize demonstrations of solidarity, or who are unwilling to work with the general community, would also lessen the effectiveness of institutions in affecting demonstrations.

Controls

Other than the primary independent variables of interest, other community specific factors, like the economy in an area, can influence demonstrations of solidarity. Information on the economies of each area was gathered from the U.S. Census Bureau and Bureau of Labor Statistics. This economic data is supported through publications that discuss economic growth

within each area. Additionally, data on the ethnicity of each area is provided in order to clarify the ethnic makeup of an area.

Dependent Variable: Demonstrations of Solidarity

Though the articulation of the dependent variable will appear similar to how it was measured through the experiment (social media activity, volunteering, blood donations, monetary donations, event participation) it will not be restricted to those five things. For example, collaboration between groups and creation of groups are two unique types of demonstrations of solidarity that were able to be measured qualitatively. The dependent variable is measured through examination of primary source material that provided information on any kind of demonstration of solidarity. Primary sources captured many different demonstrations of solidarity, like the size and frequency of vigils and other gatherings along with how much money was donated to official relief funds. Data on demonstrations was also gathered through the interviews. Questioning was framed to gather information on post event demonstrations and the effects of the independent variables.

Orlando, Florida

Just before 2:00AM Omar Mateen parked a rental vehicle north of the LGBT oriented Pulse nightclub and entered with a Sig Sauer MCX semiautomatic .223 rifle and a 9mm Glock 17 handgun. Almost immediately after entering he shot a patron, while Orlando Police Department Detective Adam Gruler sent out the initial emergency call for assistance. Detective Gruler shot at Mateen several times as he targeted clubgoers through the club. Around 2:03AM other OPD units arrived and began assisting. They formed a contact team and moved through the

club, shooting at Mateen several times. Around 2:10AM it became apparent that Mateen had barricaded himself inside the north restroom inside the club, which changed the situation from an active shooter to a barricaded gunman. Mateen had several conversations with crisis negotiators before the OPD SWAT team made entry into the bathroom where he had hostages. At 5:14 while the entry point was being widened Mateen opened fire on the SWAT team members, striking one in his ballistic helmet. At 5:15AM OPD reported that Mateen had been killed after exchanging gunfire with the SWAT team members. Surviving hostages were extricated from the area and directed to medical treatment. At 11:15AM a joint statement from responding agencies announced that Pulse and the surrounding area was safe.

Forty-nine club patrons were dead and 53 more were wounded. At the time, the Pulse nightclub attack was the highest single casualty terrorist attack in the United States since September 11. The Pulse nightclub was a well-known LGBT establishment and the majority of the victims were Hispanic in descent and under the age of 40. Many of the victims were active in the LGBT community in that they were publicly known as gay, lesbian, bisexual or transgendered. Additionally, victims were students, parents, soldiers, and involved in a diverse range of professions (Bloch et al. 2016).

Area Descriptors

The Pulse nightclub is in the southeastern portion of the city of Orlando in Orange County, Florida. In 2016, Orlando had approximately 271,000 people and unincorporated Orange County had an additional 1.28 million people (. Orlando is best known as a tourism mecca and for its world class attractions such as Walt Disney World and Universal Studios.

More than 150 international companies representing 20 nations have facilities in Orlando (Orlando Economic Partnership 2018). In addition to tourism and hospitality, the Orlando area is a hub of defense contract driven technology as Lockheed Martin, Boeing, Raytheon, Northrop Grumman and others all have large offices in the area. Patrick Air Force Base, Cape Canaveral Air Force Station and the Kennedy Space Center are all within 60 miles. Hospitality and tourism remain the main backbone of Orlando/Orange County as nearly 20% of the population works in leisure or hospitality and 68 million people visited Orlando in 2016 (Stratton 2014; Russon 2018). Those tourists contribute greatly to the economy of Orange County, and visitors pay more than 5 billion dollars a year in state and local taxes (Orlando Economic Partnership 2018). In 2018, the Milken Institute ranked the Metro Orlando area 7th as a best performing city economically. Between 2014 and 2018 the Central Florida region was ranked the top region for job growth (Shanklin 2018). Between 2015 and 2018, the City of Orlando was ranked #1 in the U.S. for job growth (Bureau of Labor Statistics 2018). GDP per capita is significantly higher in Orange County than the rest of Florida and United States (SSTI 2018; Bureau of Economic Analysis 2016). Poverty rates were slightly higher than the rest of the state and national average while the median household income was higher than the rest of the state, but not the nation (U.S. Census Bureau).

Table 8: Case #1 Descriptors

2016	Orange County	Florida	U.S.
Population	1,314,267	20,612,439	323,127,515
White Only	64.7%	75.9%	73.3%
Poverty	16.6%	14.7%	14%
Unemployment	4.4%	4.9%	4.9%
Educational Attainment	31.9%	27.9%	30.3%
Gross Domestic Product per Capita	\$69,518	\$38,398	\$49,253
Median Household Income	\$51,335	\$50,860	\$57,617
Violent Crime (per 100,000)	635.2	430.0	386.3
Property Crime (per 100,000)	3,686.1	2,686	2,450.7

Casualties

The majority of violent mass casualty events result in a lesser amount dead than 49.²⁰ At the time, 49 dead as a result of a violent mass casualty event was the highest since the September 11th attacks. The average number of casualties for a violent mass casualty event between 2000 and this event is 11.23. Therefore, this event's casualty number is coded as high because it is much higher than the average.

LGBT Community as a Vulnerable Group

The Pulse nightclub was a well-known, primarily LGBT establishment (Tunstall & Tunstall 2012; Cook 2011). Many of the victims identified with that community. Since the LGBT community may be considered a vulnerable group, demonstrations of solidarity may be higher following any trauma to that group. In objective terms, the LGBT community is a

²⁰ Of the 132 mass casualty events accounted for, the mean number of casualties is 51.35. Excluding the outliers of the 9/11 terrorist attack and Hurricane Katrina, the mean number of casualties drops to 19.94. There were 52 violent events during this time with a mean number of 11.23 casualties for each event.

vulnerable community and that vulnerability seems to be perceived by the rest of the nation. First, in some places there is still a strong social stigma that comes with being LGBT. This stigmatization is a driving factor into why LGBT people are seen as vulnerable because it can affect access to education, employment etc. This stigmatization causes LGBT people to become concerned about being victimized. Second, we are only several generations away from a time when LGBT individuals had virtually no rights or recognitions regarding their sexual orientation and violence was much more common against LGBT individuals. Third is the lack of uniform and consistent laws protecting LGBT people across the nation. Finally, LGBT people are perceived as vulnerable from those minimally or not involved with the LGBT community mostly. This is most evident through the high support for LGBT related legislation by non-LGBT people. Though LGBT individuals are becoming much more a part of mainstream society, there is still much of the U.S. and world where LGBT individuals are treated as outcasts and punished for their behaviors. As the number of publicly out LGBT individuals increases, the perceptions of vulnerability are likely to decrease because the LGBT lifestyle will become more of a social norm.

Treatment of LGBT People

Homosexuality is still illegal in 76 countries and is punishable by death in six (UNAIDS 2014). Historically within the U.S. and many western nations, LGBT individuals were often treated as mental health patients. Throughout LGBT history, people have been often tormented by those with a religious fundamentalist ideology, which was found to be a strong predictor of negative implicit evaluations (Rowatt et al. 2006).

Many people recognize the discrimination that LGBT people face and support for LGBT people and policies is reasonably high. Nearly 70% of surveyed Americans are in favor of laws that specifically provided discrimination protections for LGBT people and 35% that strongly favor them (Vanermaas-Peeler et al. 2018). Media coverage of LGBT people and issues had been historically negative. However, since the 1990s LGBT people and culture began to receive more positive coverage. This more positive framing of the LGBT community through the mainstream media has served to not only increase acceptance and support for the LGBT community but also to highlight current injustices that still plague the community (Fejes and Petrich 1993).

Discrimination and social exclusion against LGBT people can have serious consequences such as exclusion, harassment and marginalization that lead to relatively low education levels in LGBT teenagers (Williams and Ritch 1994; D’Augelli et al. 2002). Previous empirical findings suggest that stigmatization, discrimination, criminalization and harassment of LGBT people combined with low access to education, employment and health services illustrate systematic disadvantages LGBT people face which makes them a vulnerable population (Ekmekci 2017).

Public opinion has become more supportive of LGBT rights. For example, public support for gay and lesbians has doubled in the last thirty years, significantly higher than any other marginalized groups (Flores 2014). The replacement of older less supportive generations with younger, more supportive people is important. However, Flores (2014) also noted that the increases in LGBT people being “out”, the growing numbers of LGBT characters in media and the active national discussion on LGBT rights as likely reasons for the increase in support. While evidence seems to indicate that the younger generations are bringing much more LGBT support with them, there is growing support across all age groups (Fetner 2016). The most positive indicator of having positive feelings towards the LGBT community is knowing someone who

identifies as a member of that community. As it becomes more common and easier to “come out”, the support for LGBT issues is likely to continue to rise as more people will know someone within the LGBT community (Fetner 2016).

While acceptance of LGBT people has risen, it is important to recognize that a portion of the population is still unaccepting and unsympathetic to the LGBT lifestyle. For example, in 2015, the year before Pulse, nearly 30% of respondents believed same sex relations between consenting adults should be illegal (Gallup 2019). As part of that same survey, Gallup (2019), found that nearly 40% of respondents believed that same sex marriages should not be recognized by law with the same rights as traditional marriage. Gallup (2019), also found that approximately 35% of respondents believed that gay and lesbian relations was “morally wrong”.

Targeting of LGBT People

Whether sexual orientation belongs as a protected class under the Civil Rights Act of 1964 is something that is frequently contested in state and federal court. The U.S. Equal Employment Opportunity Commission (EEOC) ruled that sexual orientation is a protected class, though that decision is only selectively binding (Wilson 2015). There are limited national protections for LGBT individuals and the majority of protections provided by the government for LGBT individuals falls at the state level.

Sexual orientation consistently ranks as the third highest motivator for hate crimes, following race and religion (Marzullo and Libman 2009). In 2009 the definition of a hate crime expanded when President Barack Obama signed the Matthew Shepard and James Byrd Jr. Hate Crimes Prevention Act to include sexual orientation, gender identity, disability and gender in the definition and allowed the FBI to begin investigating those crimes.

Violent hate crimes perpetrated due to a victim's sexual orientation were more severe than both racial and religious victims (Dunbar 2006). Further research has suggested that LGBT individuals are more likely to be targeted than any other minority for a hate crime (Park and Mykhyalshyn 2016). Fear of being victimized is also high in the LGBT community and a Harris Interactive (2006) poll found that well over 50% of LGBT individuals surveyed were concerned over victimization due to their sexual orientation; a sharp contrast to only about 6-7% of non-LGBT individuals who fear about being the victim of a violent crime (Gallup 2006; Gallup 2007). In 2016, there were 1,076 hate crimes in the U.S. where someone was targeted due to their sexual orientation, including 32 in Florida and 2 in Orange County. In 2016, Orange County was not a particularly dangerous place for LGBT people. While these numbers seem to be low and according to Table 11 the numbers of LGBT hate crime incidents are decreasing. However, they do still exist, whereas non-LGBT individuals fear crime, but there is a lack of this enhancement that being a member of a protected group brings.

Table 9: LGBT Incidents

LGBT Reported Incidents	Orange County	Florida	U.S.
2016	2	32	1076
2015	1	14	1053
2014	4	12	1017
2013	5	20	1233
2012	6	42	1135
2011	6	25	1293
2010	4	29	1277

Many LGBT individuals also do not feel comfortable coming forward to law enforcement as a victim and many LGBT victims are reticent with law enforcement. Criminal justice curriculum often seems to be focused on race and gender more than sexual orientation and LGBT issues have not been taught prominently in criminal justice institutions even though

crimes based on sexual orientation are still present and increasing in some situations (Cannon and Dirks-Linhorst 2006). Dunbar (2006) found that 28% of sexual orientation-based hate crimes were not reported to police after comparing hate crime statistics and statistics provided by a community level LGBT organization in California.

In 2014, the ban on same sex marriage in Florida was ruled unconstitutional and same sex marriage was legal in every state by 2015 (*Brenner v. Scott*). At the state level Florida does not offer many protections for LGBT individuals. According to the Human Rights Campaign, the state of Florida has failed to act on 8 of the 10 most pressing issues affecting the LGBT community (HRC 2019). For example, Florida does not have laws prohibiting the discrimination of individuals based on their sexual orientation regarding housing, employment or public accommodations. Florida also does not have a law addressing school anti-bullying or education discrimination based on sexual orientation. Florida does however, support marriage equality and other relationship recognition and supports a state level law that addresses hate and bias crimes based on sexual orientation, education, transgender healthcare, gender updates on identification documents and conversion therapy. Orange county prohibits discrimination in employment based on sexual orientation and gender identity in both the private and public sector (Equality Florida 2010). The City of Orlando has had a non-discrimination ordinance since 1973, created a domestic partnership registry in 2011 and actively continues to support LGBT causes in the private and public domains (City of Orlando 2019).

Institutions

Government institutions in both Orlando and Orange County are strongly mayoral in nature. These mayors are prominent members of the community and exert a significant amount

of control over their respective areas and constituents. Mayor Dyer was a prominent member of the community following Pulse and he appeared often participating in demonstrations of solidarity and speaking with the media about the event. Additionally, Governor Scott came to Orlando following Pulse and was involved in demonstrations of solidarity. Economic institutions in Central Florida are driven primarily by the tourist/hospitality industry. Walt Disney World and Universal Orlando are very influential in both the political and public spheres. Nonprofit institutions are also active throughout Central Florida and many of them have existing partnerships with the local government or businesses to provide services. For example, OneBlood provides blood products to all hospitals throughout Central Florida. The Red Cross has a strong presence in Orlando and responded to Pulse.

Institutionalism is strong within many sub-communities that exist along personal identity lines and the LGBT sub-community is no different. Many LGBT focused organizations were founded to provide safe spaces for LGBT people and, though acceptance has risen, those organizations are still around to provide support for LGBT people within the communities in which they serve. National LGBT specific institutions like GLAAD are active in the LGBT community today and other local specific institutions like Equality Florida serve smaller sub-communities. There is likely going to always be a strong sub-community of LGBT individuals akin to certain races or ethnicities. The Center and The Zebra Coalition are two LGBT institutions that existed within the Orlando community prior to Pulse.

The victims in this event were not only viewed as members of the LGBT community, but also as members of the larger Orlando community. As such, they benefited from the institutional response from government and non-government general institutions in addition to those specific LGBT institutions.

Media Coverage

On June 16, 2016, during a visit to Orlando, President Obama described the incident as an “attack on the LGBT community” and vowed to “end discrimination and violence against our brothers and sisters who are in the LGBT community” (Obama 2016). President Obama’s comments regarding this attack were covered extensively by both local and national media. Other press coverage described the incident as an attack on the LGBT community. In a June 12th interview with CNN, Florida Senator Marco Rubio condemned the attack and stated that the shooter’s radical Islamic beliefs compelled him to specifically target the gay community (Bradner 2016). For example, on June 13th CNN’s developing coverage of the event noted Pulse as a “gay nightclub” (Ellis et al. 2016). A 2019 study examining online media sources and their publications following Pulse found that the victims were primarily identified as LGBT and the Hispanic nature of the victims was often neglected in coverage (Meyer 2019).

The entire front page of the Monday, June 13th edition of the Orlando Sentinel was a memorial to the victims. In that memorial it was noted that Pulse was an LGBT themed nightclub and that the suspect was potentially driven by a hatred for homosexuals (Cutter 2019). Local television stations were quick to report and many sent reporters near the scene and they had a continued presence from the moment they became aware of the incident. Pulse related stories focused on the terrorism aspect, the high victim count and the identity group of the victims. For example, the New York Times coverage of the incident included the LGBT nature of the victims, terrorism and high casualty number (Alvarez and Perez-Pena 2016; Santora 2016). New York Times coverage was very focused on the attack being at a gay establishment and extensively covered other LGBT violence in their Pulse stories. Washington Post coverage

was very focused on the terrorism aspect of the event and the high casualty number. However, their coverage did include that the victims were LGBT and even mentioned how ISIS executes LGBT people in areas they control (Tsukayama, Berman and Markon 2016; Goldman 2016). Many of the Pulse related stories focused on remembrance of the victims and Orlando stations WESH-Channel 2, WFTV-Channel 9 and News 13 each won Emmy awards for their coverage of the Pulse nightclub attack (Boedeker 2016). Throughout the Central Florida area many memorialization's of the incident were focused on the 49 victims and wording like "Remember the 49" was common in headlines.

Media coverage regarding Pulse continued well on several fronts. The first was regarding Mateen's wife, Noor Salman, who was later charged with obstruction of justice and aiding and abetting her husband in providing financial and material support to a terrorist organization. In March of 2018 she was acquitted of those charges. Her role in the attack and subsequent trial kept the Pulse attack in the media spotlight and investigative information was released regarding the attack through her trial. Second was that Omar was a person of interest in a terrorism related investigation in 2013 and into 2014, though that investigation was later abandoned due to lack of evidence of wrongdoing. His father Seddique Matten had also been an FBI informant sporadically from the early 2000s up to 2016 and question even arose over Omar's sexuality due to the LGBT club being targeted. These additional stories related to Pulse kept the event in the media well after it occurred.

Dependent Variable: Orlando Strong

The mission for the City of Orlando Emergency Operations Center (EOC) was to provide operational coordination and support for the command post and on-scene operations.²¹ The EOC began supporting victims and those immediately affected through the emergency information center and help line, the Family Reunification Center²² and Family Assistance Center.²³ Community support was also provided by assisting in dignitary visits, funerals, memorial services and vigils, the Orlando United Assistance Center and the OneOrlando Fund.

Once news of the event spread people were attempting to make donations through the EOC. The EOC worked closely with other government institutions (FBI, Department of Justice, City, County Staff and Medical Examiner's Office) and non-government general institutions (Red Cross, Goodwill, Salvation Army) to provide relief services to those affected by the tragedy (Smith 2016). Donations made through EOC were directed to the appropriate organizations as the EOC is not intended to be a donations center.²⁴

²¹ Based on Author's interview with an official from the City of Orlando Emergency Operations Center on May 9, 2019. The EOC was notified of the event around 3:30AM on the morning of June 12th. They recommended and received a full activation status (Level 1) by Mayor Dyer from June 12th to June 22nd.

²² Author's interview with an official from the City of Orlando's Emergency Operations Center on May 9, 2019. The FRC was located at the Beardall Senior Center and ran from June 12th to June 14th with the purpose of notifying next of kin and victims' identification and it was staffed with FBI Crisis Team, FEMORS and the FDLE.

²³ Author's interview with an official from the City of Orlando's Emergency Operations Center on May 9, 2019. The FAC was located at Camping World Stadium and ran from June 15th to June 22nd with the purpose of establishing support for the immediate needs of families, friends and victims. Services provided there included assistance with air travel/lodging, child and family services, consulate services, funeral services, legal aid etc. They served over 900 individuals and 255 families in the time they were operational.

²⁴ Author's interview with an official from the City of Orlando's Emergency Operations Center on May 9, 2019. The EOC mentioned that donations were directed to the GoodWill or the RedCross,

In the morning hours of June 12th, Mayor Dyer began posting updates, such as the victim list, on what had occurred within his city.²⁵ In one of these messages he notified the public that he had declared a state of emergency for the city of Orlando by Florida Governor Rick Scott, which allowed for further resources to be

“June 12, 2016, was the most horrific day in the history of the City of Orlando. In the days since the tragedy, the members of our community have stood up and stood together to show the world the best humanity has to offer. Together we will remain Orlando United.” – Mayor Buddy Dyer

brought in (Dyer 2016). He also included a hotline for family members and a link to grief counselors through Aspire Health and the Zebra Coalition (Dyer 2016). Mayor Dyer also asked people to leave memorial items at the nearby Dr. Phillips center and to delay more vigils until public resources could be allocated to them. In the month that followed the City of Orlando tweeted 190 times and received 3.8 million impressions, 19,200 clicks and 7,877 new followers while Mayor Dyer’s account tweeted 145 times in that month and received 9,100 clicks and 3,909 new followers (Taylor and DeVault 2017). Through Facebook, the City of Orlando posted 159 times, received 2.6 million impressions, 23,919 clicks and 8,340 new followers while Mayor Dyer’s Facebook account posted 119 times, received 1.8 million impressions, 7,023 clicks and received 4,549 new followers (Taylor and DeVault 2017). The Twitter and Facebook activity from the City of Orlando in the month following Pulse are drastic increases from normal activity.

On July 11, 2016 the Orlando United Assistance Center (OUAC) was founded to assist the individuals directly impacted by the Pulse tragedy. The OUAC was a partnership between the City of Orlando, Orange County government and the Heart of Florida United Way

²⁵ Author’s interview with an official from the City of Orlando’s Emergency Operations Center on May 9, 2019. That official credits the strength of the Mayor’s Office and his strong leadership and commitment to public safety for much of the success of the post Pulse operations.

and continued the work that had been done by the Family Assistance Center.²⁶ The OUAC began with a mission to provide “long term healing through targeted mental health services, community building and awareness” and became a resilience center for anyone Pulse affected (OUAC 2019).²⁷ The OUAC provides a tailored approach to the LGBT and Hispanic communities through its use of case managers and the general approach is based upon the most effective healing processes from similar events. The OUAC primarily receives federal funding as they continue to actively assist individuals on a case by case basis with approximately 11 full time employees and approximately 300 active clients at any given time.²⁸

The institutional response by the City of Orlando government included both direct and indirect approaches in order to assist survivors and the community. Mayor Dyer’s personal leadership and willingness to work with other institutions further enhances the governmental institution responses that occurred following Pulse. Indirectly, the government collaborated closely with non-governmental institutions to provide services to the victim and community. They also worked closely with businesses and specific LGBT and Hispanic institutions through the OneOrlando Fund.

Fundraising Efforts

Within several weeks of the shooting, Mayor Dyer’s general counsel reached out to Ken Feinberg for his guidance in how to respond to such an event.²⁹ Mr. Feinberg suggested to

²⁶ Author’s interview with an official from the OUAC on May 14, 2019.

²⁷ Author’s interview with an official from the OUAC on May 14, 2019.

²⁸ Author’s interview with an official from the OUAC on May 14, 2019. The majority of those employees are case managers, though they do have 2 counselors on staff.

²⁹ Author’s interview with an official from The Law Offices of Ken Feinberg on May 14, 2019. The city came to an agreement with Mr. Feinberg so that he would provide administrative services, hold two townhall meetings, design plans and eligibility criteria for recipients of the funds raised.

consolidate all of the funds that had been set up to raise money for the victims and affected families.³⁰ Mayor Dyer responded by announcing the OneOrlando Fund near the end of June 2016. The OneOrlando Fund represents the diversity within Orlando, including those in the Hispanic and LGBT communities (OneOrlando 2016). Orlando Magic President Alex Martins was the chair of the board and the remaining members represent diverse groups including the Hispanic and LGBT communities (Dyer 2016; City of Orlando 2016; OneOrlando 2016). Table 10 shows OneOrlando Fund board members (Broffman 2016). Equality Florida, the GLBT Community Center of Central Florida (The Center) and the National Compassion Fund announced a partnership with the OneOrlando Fund to better ensure that all collected funds were disseminated in a timely, unified and transparent manner (OneOrlando 2016). Economic powerhouses in the area contributed strongly to the fund. Prominent donors included Disney (\$1 million), Darden restaurants (\$500,000) the DeVos family (\$400,000), and \$100,000 each from the Orlando Magic, Orlando City Soccer Club and JetBlue airlines (Santich, Jacobson and Arnold 2016). By December of 2016 the OneOrlando Fund had distributed \$27,410,000 for 299 claims of the 333 submitted, representing 98% of all eligible claims (Bednarz 2016). The fund closed on January 1, 2017 and any remaining funds were distributed accordingly.³¹

³⁰ Author's interview with an official from The Law Offices of Ken Feinberg on May 14, 2019. That official further suggested that a publicly operated, custodial fund would be the most beneficial.

³¹ Author's interview with an official on the OneOrlando Fund Board on May 14, 2019. That official stated that donations came in from 127 different countries and characterized the fund as very much a short-term oriented entity while other groups were looked to provide support in the longer term.

Table 10: OneOrlando Fund Board

Name	Position	Company
Rena Langley	Senior V.P.	Walt Disney World
Diane O'Dell	V.P. of Community Relations	Universal Orlando Resort
Stephanie Ghertner	Director	Darden Foundation & Community Affairs
Mark Meyer	Industry Manager	JP Morgan Chase
Paul F. Bryan	Chief Executive Officer	Grover Bryan, Inc.
Jennifer Foster	Owner and Executive Producer	Foster Productions
Diana Bolivar	President	Hispanic Chamber of Commerce of Metro Orlando
Carlos Carbonell	Chief Executive Officer	Echo Interaction Group
Ken Robinson	President and Chief Executive Officer	Dr. Phillips Inc. and The Dr. P. Phillips Foundation
Mark Shamley	President and Chief Executive Officer	Association of Corporate Contributions Professionals (ACCP)
Michael Farmer	Statewide Deputy Director of Development	Equality Florida
Tim Vargas	Board President	The Center
Chris McCullion	Chief Financial Officer	City of Orlando
Walter G. Hawkins	Director of Urban Development	City of Orlando Downtown Development Board

Vigils and Gatherings of Solidarity

Smaller vigils occurred throughout Orlando on the night of June 12th, including at a downtown bar and a high school (Hayes et al. 2016). On June 13th Mayor Dyer and other community leaders spoke at a makeshift memorial at the Dr. Phillips center that thousands attended (Burch and Harris 2016). On June 14th, the nearby University of Central Florida hosted its own vigil to honor the victims, including a current student and alumnus who were killed (UCF Today 2016). On June 19th, “hundreds” attended a vigil that took place at Magic Kingdom after being organized by an online Walt Disney World related blog (Mauney 2016). A week after the attack a better organized vigil occurred at Lake Eola in downtown Orlando, which approximately 50,000 people attended to show solidarity with the afflicted LGBT and Hispanic communities (Bevil and Stennet 2016). Vigils and signs of solidarity were not restricted to the Central Florida area following the Pulse attack. Vigils to show solidarity with Pulse victims occurred in Alaska, California, Colorado, Georgia, Idaho, Louisiana, Michigan, Nevada, New Mexico, New York, Ohio, Oregon, Pennsylvania, Rhode Island, Vermont and Washington D.C.

(Taylor 2016; CBS 2016). International vigils of solidarity also occurred in London, Hong Kong, Mumbai, Sydney, Paris, Berlin and Seoul (Taylor 2016).³² Nearly 4% of the Orange County population attended the main vigil in downtown Orlando and numerous other vigils and gatherings occurred, both in the Central Florida area and out of the state and nation.

Blood Supply Reaction

In the first 24 hours following the shooting, 372 pints of blood were used to help shooting victims (Brinkmann 2016). Blood and other blood products are one of the most important resources tapped following a violent mass casualty event as the number of dead can increase if medical resources are unprepared. The supplier of blood and blood products to Central Florida and the Orlando Regional Medical Center (ORMC), where a majority of the victims were taken, is OneBlood.³³ Once victims began arriving at ORMC, lifesaving medical procedures were beginning and the blood at ORMC was being used. This caused the medical staff at ORMC to begin placing orders for more blood.³⁴ Once it became apparent that a violent mass casualty event had occurred, OneBlood activated their Business Continuity Plan (BCP).³⁵ Over the next two weeks, 109 pints of blood products were used for shooting victims and the hospital never had a shortage of any products. No victim experienced any delays according to OneBlood

³² A prominent official within the LGBT community credits the worldwide diaspora of LGBT individuals and groups for the strong international reaction.

³³ Author's interview with an official from OneBlood on May 8, 2019. OneBlood was created in 2012 after 3 regional blood banks merged together to provide better services to the hospitals and medical facilities within the southeast.

³⁴ Author's interview with an official from OneBlood on May 8, 2019. Hundreds of orders were placed throughout the night as blood began to be used.

³⁵ Author's interview with an official from OneBlood on May 8, 2019. The BCP was created in 2015/2016 to formalize how to respond to such events. The BCP has been used numerous times and activated whenever an event occurs within their service area that more blood is likely to be needed. That official stated that it has been used for shootings, storms and bridge collapses in the past.

(Brinkmann 2016).³⁶ The Orlando area was able to provide the majority of the blood, though O-negative and O-positive was in high demand so several other cities within the region transferred blood products. What often goes unnoticed is the fact that blood donations require between 24 and 48 hours to be processed before they can be disseminated to medical facilities for use. The blood previously donated is what saves lives in the immediate aftermath of a violent mass casualty event. The increases in blood donations that follows an event help in that blood products continue to be needed in the days and weeks following an event.

OneBlood reported that 5,300 pints were donated on June 12th, three times what it usually receives per day (Brinkmann 2016).³⁷ The week following the attack saw the biggest response since the September 11th terrorist attacks as OneBlood received 28,000 points of blood, well above the average weekly volume of 18,000 pints (Brinkmann 2016).³⁸ By June 28th, 85 percent of the blood collected in the week after the shooting had been distributed within the OneBlood region of hospitals (Brinkmann 2016). The American Association of Blood Banks (AABB), of which OneBlood is a part of, has a task force on domestic disasters and terrorism that helps affected regions tap into a larger array of resources in order to assist, but local blood banks stepped up quickly so the task force was not formally activated (Brinkmann 2016). Whenever an event where blood is likely going to be needed, OneBlood proactively reaches out to those affiliates to offer assistance and following Pulse, the Orlando area affiliates received dozens of

³⁶ Author's interview with an official from OneBlood on May 8, 2019.

³⁷ Author's interview with an official from OneBlood on May 8, 2019. During a press conference following Pulse a trauma doctor at ORMC asked people to donate blood and the official interviewed believes that provided an added motivation to donate. Many blood centers were taking donations until 4AM and OneBlood had no issue with filling the staffing requirements that such a huge surge brings, in either workers to take donations or technicians to prepare the blood for distribution.

³⁸ Author's interview with an official from OneBlood on May 8, 2019. 80% of blood was donated through their mobile donation vehicles "Big Red Buses" and the remaining amount was taken in at designated blood donation facilities, of which there are 90 through their service area.

blood products from their service area.³⁹ Following Pulse, OneBlood stressed that consistent blood donations are what saves lives. Approximately 30% of donors following Pulse were first time donors and 25% of donors had donated multiple times a year after Pulse occurred. OneBlood abides by Federal Drug Administration guidelines regarding blood donations which caused some minor strains following Pulse. Though some of the LGBT community were unable to donate due to FDA mandated guidelines, many of those individual still tried to help in the best ways they could, often through soliciting others to donate.⁴⁰

Established LGBT Groups Respond

Within the first 9 hours of the attack Equality Florida⁴¹, a statewide LGBT civil rights advocacy group, had raised \$767,000 through a GoFundMe page dedicated to aid the victims and survivors (Shapiro 2016; WTVR 2016; Chillag and Wattles 2016). Some of the earliest large donors were Cricket Wireless (\$25,000), Executive Pride (\$30,000), singer songwriter Jeffree Star (\$20,000) and even GoFundMe themselves who donated \$100,000 and waived their transaction fees for any donations (Star 2016; Cricket Wirless 2016; Chillag and Wattles 2016). By June 16th, the goal of 5 million dollars had been met, breaking the previous record of 2 million dollars (Pfeiffer 2016; Maxwell 2016; Kraft 2016; Chillag and Wattles 2016). Equality Florida partnered with the National Center for the Victims of Crimes (NCVC) to distribute the raised funds. NCVC is a non-profit that has helped distribute funds from other violent mass

³⁹ Author's interview with an official from OneBlood on May 8, 2019

⁴⁰ Author's interview with an official from OneBlood on May 8, 2019. That official noted that the guideline barring men who have had sex with another man from giving blood changed from a lifetime ban to only a one-year deferral soon before Pulse occurred. That official also cited guidelines barring or temporarily barring people with tattoos, piercings and certain travel and lifestyle restrictions from giving blood as a reason for why some were turned away.

⁴¹ I attempted to interview a representative from Equality Florida but did not receive a response to my inquiry.

casualty events, most notably the Fort Hood shooting in 2009 and a shooting in Chattanooga, Tennessee in 2015 (Chillag and Wattles 2016). By September of 2016 the fund had raised \$7,854,920 from 119,523 people (GoFundMe 2016). Equality Florida made two promises following Pulse; the first was to help victims and their families recover and the second was to ensure that Pulse never happened again (GoFundMe 2016; Evans 2016). Of the millions of dollars donated through the GoFundMe account set up, Equality Florida claimed that they kept none of it for administrative purposes and that all of it was appropriately disseminated (GoFundMe 2016). Since Pulse, Equality Florida has vowed to better protect LGBT individuals by passing legislation aimed at banning anti-LGBT discrimination and gun violence prevention policies (GoFundMe2016). Equality Florida also continues to accept money through a new GoFundMe page set up titled the “Honor Them with Action Fund” set up in memory of those killed during Pulse (GoFundMe 2016).

The Center opened in Orlando in 1978 and is one of the oldest organizations in the U.S. operating to promote the well-being of the Central Florida LGBT community while simultaneously serving non LGBT people of Central Florida. The Center advertises itself as a “sanctuary/safe space for all LGBTQ people in Central Florida” while also providing programs and services that empower, educate and entertain the LGBT community. They also are building strategic alliances for the purpose of increasing the influence and relationships between the LGBT community and the broader public. The Center in Orlando is the second oldest in the nation after the location in Southern California. That location was opened as a response to the Stonewall Riots in 1969 in order to provide safe gathering locations for LGBT individuals.⁴² The

⁴² Author interview with an official from The Center on April 25, 2019. The official, who identified himself as a member of the LGBT community, stated that the LGBT community felt alienated and as if it lacked safe spaces following the Stonewall riots in 1969 where LGBT establishments were targeted by law enforcement.

morning following Pulse, The Center opened at 7am, operated for longer hours and immediately became a rallying point for the LGBT and greater Orlando community.⁴³ Individuals would leave water and food donations with the organization and they would then disseminate those donations. The Center was so busy immediately following Pulse that they paused their STI testing in order to focus on mental health counseling.⁴⁴ The Center received approximately 750 thousand dollars via donations within the month following Pulse, which they donated to the GoFundMe account set up by Equality Florida.⁴⁵ The Center also donated approximately \$31,000 in small business grants to the businesses in South Orlando that were affected by Pulse.⁴⁶ The Center became a meeting point for many resiliency related activities following Pulse. For example, The Center received significant media coverage following the event. The Center corresponded with family members of victims that were out of state in order to bring them to Orlando and closer to their loved ones.⁴⁷ As the oldest LGBT organization in the area, The Center worked closely with other LGBT organizations in order to better provide resources to those afflicted by the event.⁴⁸

The increase in foot traffic to The Center following Pulse continued for a long while before diminishing.⁴⁹ In 2015 The Center received \$324,765 in total revenue (GLBT 2015). In 2016 The Center had a 412% increase in total revenue as they received \$1,664,613 (GLBT 2016). The Pulse event put Orlando and the LGBT community in the spotlight and donations

⁴³ Author interview with an official from The Center on April 25, 2019. That official noted that the long hours for the workers of The Center came naturally as they believed they had a duty to their community to provide services.

⁴⁴ Author interview with an official from The Center on April 25, 2019. That official further explained that local counselors Adam Miller and Kristen Wieck provided mental health counseling on behalf of The Center.

⁴⁵ Author interview with an official from The Center on April 25, 2019.

⁴⁶ Author interview with an official from The Center on April 25, 2019. That official specifically noted several businesses near Pulse that were effectively shut down while the investigation was ongoing.

⁴⁷ Author interview with an official from The Center on April 25, 2019.

⁴⁸ Author interview with an official from The Center on April 25, 2019. The Center worked closely with Equality Florida and Zebra Coalition before working with the Orlando United Assistance Center.

⁴⁹ Author interview with an official from The Center on April 25, 2019. That official stated that while foot traffic had eventually decreased The Center was still busier than before Pulse occurred.

were not restricted to the immediate and afflicted area.⁵⁰ In 2017, their total revenue decreased back down to \$426,696 (GLBT 2017). The amount of total revenue in 2018 decreased even further down to around \$200,000 which was attributed to trauma fatigue.⁵¹ The Center continues to provide mental health counseling and whenever another mass casualty event occurs that receives a significant amount of media attention, they see an increase in counseling needs.⁵²

In an effort to provide the appropriate resources for the victimized community, Mayor Dyer directed people to the local mental health center Aspire and its sub-organization specifically targeted for the LGBT youth, the Zebra Coalition.⁵³ The Zebra Coalition's primary focus is on housing issues for LGBT youth (13-24 year olds) while they also deal with trauma reduction and gender issues.⁵⁴ The Zebra Coalition is funded primarily through grants and after Pulse happened they received two new opportunities; one to expand into Osceola County and the other to offer more services for the 6 months after the attack happened.⁵⁵ As with many of the other organizations within the area, they saw an influx of donations following Pulse. They carefully accepted monetary donations while distributing out material donations to those who

⁵⁰ Author interview with an official from The Center on April 25, 2019. That official could not provide official numbers but believed a significant portion of the donations they received that year were from out of state.

⁵¹ Author interview with an official from The Center on April 25, 2019.

⁵² Author interview with an official from The Center on April 25, 2019. That official believed that Pulse had such an effect on the community that many psychological issues in victims, witnesses and family members are still ongoing which causes an increase in the need for mental health counseling whenever another violent mass casualty event occurs.

⁵³ Author interview with an official from the Zebra Coalition on May 13, 2019. The Zebra Coalition was formed in 2010 and bought a building in 2013 in which they currently operate out of directly across from The Center. The city of Orlando has always had a good working relationship with the Zebra Coalition and as of 2019, the treasurer of the city is on the Zebra Coalition board of directors. In 2019 the Zebra Coalition separated from Aspire, mainly for financial funding reasons and they continue to share many board members and overlap in many services offered.

⁵⁴ Author interview with an official from the Zebra Coalition on May 13, 2019. The Zebra Coalition has two mental health counselors and upwards of four interns at any given time that specialize in mental health counseling.

⁵⁵ Author interview with an official from the Zebra Coalition on May 13, 2019. The Zebra Coalition is primarily funded through a DFC grant from the federal government for \$125,000 a year. After Pulse happened, they received a \$50,000 grant from Humana to expand on their services and another grant through the Contigo Fund to expand into Osceola County in order to better serve the Hispanic residents there.

sought them out for help.⁵⁶ For approximately two weeks following Pulse, the Zebra Coalition set up a help line to provide the appropriate resources for those that needed them and to make it easier for mental health practitioners to sign up and volunteer.⁵⁷ Approximately 200 different mental health practitioners had volunteered their time and that same list is still in use.⁵⁸ The Zebra Coalition believes that the community is now more accepting of LGBT people, though there is a bigger security concern now.⁵⁹ As a member of CenterLink, the Zebra Coalition continues to share their experiences with other LGBT organizations across the country regarding how their organization and others responded to Pulse.⁶⁰

Demonstrations Continue and New Groups Form

In the aftermath of the tragedy, numerous groups were formed in order to provide services to the community. One month after the attack, Pulse owner Barbara Poma founded the onePulse Foundation in order to memorialize the now closed club and honor the victims.⁶¹ The organization continues to fund community grants and offers 49 educational scholarships to honor

⁵⁶ Author interview with an official from the Zebra Coalition on May 13, 2019. That official emphasized that they only accepted monetary donations when the intent was specifically help out the organization. Donations such as hygiene products, gift cards and food and water are examples of some of the things donated to them following Pulse.

⁵⁷ Author interview with an official from the Zebra Coalition on May 13, 2019. That number was through 211 and the responsibilities went to the OUAC after that time. Mental health practitioners who wanted to help signed up on a document electronically shared across other organizations offering similar assistance.

⁵⁸ Author interview with an official from the OUAC on May 14, 2019.

⁵⁹ Author interview with an official from the Zebra Coalition on May 13, 2019. That official stated that issues with sexual orientation discrimination seemingly decreased in number following Pulse and believes that transgender issues have taken more focus.

⁶⁰ Author interview with an official from the Zebra Coalition on May 13, 2019. CenterLink is an LGBT organization affiliation that spans the United States and Canada and is a means mainly for communication amongst these groups. That official stated that they routinely still receive questions and participate in discussions regarding Pulse and their organizational response to the incident.

⁶¹ Author interview with an official from OnePulse on May 8, 2019. OnePulse was informally organized immediately after the incident occurred but slowly evolved and on May 4, 2017 the organization went public.

each of the victims.⁶² Immediately following the attack, onePulse directed most of the monetary donations to the OneOrlando Fund, which operated independently from onePulse.⁶³ Donations to onePulse have slowed since the attack occurred, however, they continue to receive correspondence from across the nation and world.⁶⁴ Since its inception, the foundation has accepted 32 donations of \$10,000 or more, ranging from well-known international businesses to private individuals (onePulse 2019). The Orange County Government donated 10 million dollars of the tourism development tax revenue to onePulse. In June 2019 PVH Foundation joined Orlando Health as a 1-million-dollar donor to onePulse and Walt Disney World Parks and Resorts donated \$250,000.

OnePulse currently has seven full time staff members, a 20-member board of trustees that includes businessmen and celebrities and an ambassador's council that includes Mayor Dyer and representatives from across the nation including individuals from the 9/11 Memorial and Museum and the Oklahoma City Memorial and Museum.⁶⁵ Barbara and several early board members of onePulse travelled to the 9/11 memorials in New York City and Shanksville, Pennsylvania along with the memorial of the Oklahoma City bombing and other memorials across the nation for similar events.⁶⁶ OnePulse has always had a good working relationship with

⁶² Author interview with an official from OnePulse on May 8, 2019. That official stated that those scholarships are in the names of each of the victims, in topics the victims were involved or interested in. Each victim family maintains discretion over who receives the scholarships and each scholarship receives \$10,000 a year.

⁶³ Author interview with an official from OnePulse on May 8, 2019. That official stated that they did accept monetary donations for the organization when applicable.

⁶⁴ Author interview with an official from OnePulse on May 8, 2019. That official noted that simple demonstrations of solidarity often occurred near the club that nobody ever claimed and gave an example of a water cooler that would appear at the temporary club memorial. That official also stated that nontraditional donations include letters, poems, drawings and sculptures which they continue to receive.

⁶⁵ Author interview with an official from OnePulse on May 8, 2019. That official stated that a well-rounded and professionally diverse board was intentional by the founders of OnePulse. Board members were initially appointed but now interested individuals reach out to OnePulse about board membership.

⁶⁶ Author interview with an official from OnePulse on May 8, 2019. That official emphasized that very early on Barbara sought out guidance in appropriately memorializing the events that happened at Pulse as similar events

the media and the organization believes that social media in particular has been their best method to reach people.⁶⁷ OnePulse continues to organize and participate in events, such as 5ks and art shows, meant to raise awareness and donations and the organization is crucial in planning anniversary events on June 12th of every year. They also work with OUAC to coordinate with victims and affected families and they organize activities for those individuals twice a year. After the attack, Pulse was permanently shut down and the City of Orlando and Pulse owners grappled with how to memorialize the incident (Weiner & Tziperman 2016).⁶⁸ OnePulse continues to strive for the construction of a permanent memorial and museum.⁶⁹

OnePulse partnered with the Orange County government to officially declare June 12th as “Orlando United Day-A Day of Love and Kindness” to annually honor the victims of the attack (Orange County Government 2016). The One Orlando Collection was later created by a partnership between the Orange County government, City of Orlando, the Orange County Regional History Museum and community partners to permanently and methodically preserve the event and the memories of the deceased (OneOrlando Collection 2019).⁷⁰ More than 5,000 artifacts were gathered from the Pulse nightclub, the Dr. Phillips Center and Lake Eola where vigils occurred and the Orlando Regional Medical Center where many victims were treated (OneOrlando Collection 2019).

very rarely ever occurred within private businesses and she knew she would be strongly influencing how Pulse was remembered. OnePulse continues to work closely with the officials involved in memorials across the nation.

⁶⁷ Author interview with an official from OnePulse on May 8, 2019. That official credits the Rubenstein public relations firm out of New York for much of their consistent and positive relationship with the media and public alike.

⁶⁸ Based on the Author’s interview with both representatives from the City of Orlando and the Pulse nightclub owners, both stated that they have always had a good working relationship despite differences in how the event should be memorialized.

⁶⁹ Author interview with an official from OnePulse on May 8, 2019. That official stated that they are seeking a permanent memorial at the nightclub and a museum in the vicinity.

⁷⁰ Author interview with an official from OnePulse on May 8, 2019. That official noted that they loaned notable items from Pulse that included chandeliers, disco balls and other decorative items from inside the club.

On June 16, 2016, future founding members of The OneOrlando Alliance successfully contacted 18 other LGBT organizations asking for communication and collaboration between these likeminded groups.⁷¹ It began as a unified alliance of likeminded LGBT centered organizations before it grew to include nearly 30 different organizations, including Equality Florida, The Center, OnePulse Foundation, OUAC, QLatinX and the Zebra Coalition. The OneOrlando Alliance was formed to work in a “collaborative and transparent way to serve those affected-including victim’s families, survivors, Pulse employees, and the larger community also struggling with trauma, grief and fear” (OneOrlando Alliance 2019). As the OneOrlando Alliance was forming, the amplified communication they offered between member groups allowed for much easier assistance to be given to those in need following Pulse.⁷² In September of 2016 the newfound collaboration extended to the Orange County government after a meeting with Mayor Teresa Jacobs where she pledged support.⁷³ The OneOrlando Alliance is funded completely by local grants and often raises money for the OUAC.⁷⁴ The alliance and their coalition of member groups tackle important issues within the LGBT community. For example, the alliance organized a community forum on LGBT issues within the homeless population in Orlando and continues to work with different programs and services in Central Florida to ensure that they are LGBT inclusive (Santich 2019). The OneOrlando Alliance continues to raise money

⁷¹ Several officials I spoke too stated that an alliance was attempted in 2012 between likeminded LGBT groups throughout Central Florida but it quickly became too difficult to organize.

⁷² Author interview with an official from the OneOrlando Alliance on May 14, 2019. That official stated that they initially set up a Facebook page where different groups could communicate their needs. Examples of some of the needs they assisted in include the need for hospital space, wheelchairs, food for family members, transportation, immigration attorneys and airline tickets.

⁷³ Author’s interview with an official from the OneOrlando Alliance on May 14, 2019. That official stated that the government had been frequently involved from very early on but that Mayor Jacobs became emotional during the meeting they had and pledged much more support.

⁷⁴ Author’s interview with an official from the OUAC on May 14, 2019. That official stated that they receive about \$155,000 in grants a year.

and awareness for LGBT issues through their Act.Love.Give campaign around the anniversary of the Pulse attack every year. Through that campaign they have seen directed over 10,000 volunteer hours over the last two years.⁷⁵ The OneOrlando Alliance was briefly consulted following the Las Vegas shooting in October of 2017 and other community leaders have reached out to them.⁷⁶

QLatinX was a group formed by individuals directly connected to Pulse in July of 2016 to account for the cultural challenges many Pulse survivors face.⁷⁷ As previously noted, the majority of victims were Hispanic and many of the resilience programs and assistance measures provided to the victims and their families did not take these cultural differences into account.⁷⁸ QLatinX was founded to specifically provide services to the LGBT victims and their families where English was not the primary language of communication and where concerns over immigration inquiries were present. QLatinX was specifically formed to provide safe spaces to these individuals who did not feel comfortable relying on the other, more well-known attempts to help Pulse victims.⁷⁹ Though QLatinX was founded to serve the communities of color within the

⁷⁵ Author's interview with an official from the OneOrlando Alliance on May 14, 2019. The majority of those volunteer hours go to non LGBT causes at locations such as food banks and environmental cleanup.

⁷⁶ Author's interview with an official from the OneOrlando Alliance on May 14, 2019. That official stated that no tangible work was done in cooperation with Las Vegas officials.

⁷⁷ Author interview with an official from QLatinX on April 25, 2019. QLatinX was founded by 12 volunteers, all with connections to Pulse and is still predominantly volunteer led, though it does have a 200+ volunteer base.

⁷⁸ Author interview with an official from QLatinX on April 25, 2019. That official cited a historical displacement of LGBT people of color and claimed that Pulse was very much a "tipping point" that forced many underlying issues to be brought to the forefront within the LGBT community.

⁷⁹ Author interview with an official from QLatinX on April 25, 2019. That official believed that programs provided through programs such as Aspire and the Zebra coalition did not provide adequate considerations to the Hispanic communities primarily afflicted by Pulse.

LGBT community, they have been sought out by organizations across the nation to bridge the gap between the Hispanic community and the LGBT community.⁸⁰

Nontraditional demonstrations of solidarity are evident in institutional behaviors following the Pulse attack. For example, many new groups formed in order to memorialize the event and provide services to victims and their families. New collaboration between groups continues to the present day. This collaboration is not only between specific institutions but between government, and non-profit institutions and specific institutions. For example, the One Orlando Alliance advertises itself as an LGBT alliance, however, they partner with non-profit institutions like the United Way and both local governments. These new groups and collaborations between groups makes demonstrating solidarity easier and many demonstrations continue to this day.

Analysis

In conclusion the data collected through this case study is supportive of hypothesis 3 that when mass casualty events strike vulnerable victim groups, higher demonstrations of solidarity will result. Additionally, data collected is supportive of hypothesis 4, 4a, and 4b that strong institutional presence (particularly government leadership and specific institutions) led to higher demonstrations of solidarity. Results also indicated that the casualty number influenced demonstrations, but to a much lesser extent. Figure 12 represents how the facts of the event transferred through the media and onto the community. This figure shows how the perception of

⁸⁰ Author interview with an official from QLatinX on April 25, 2019. QLatinX deals not only with LGBT issues within the Hispanic community, but also immigration and other cultural issues as part of other coalitions, such as the Trust Orlando Coalition.

the vulnerable victim group affected demonstrations of solidarity while simultaneously showing other variables that still affected the community response to the Pulse event.

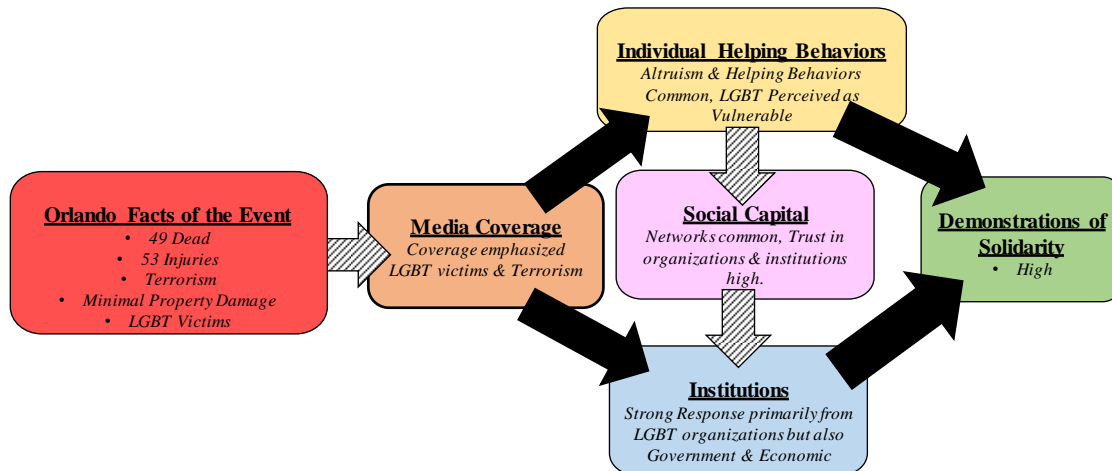


Figure 12: Case #1 Mechanism

The Effect of the Casualty Number

The number of victims and the type of event both seem to have had an effect upon demonstrations of solidarity through the media's attraction to violent and high casualty events. At the time, the Pulse massacre was the highest loss of life in a terrorist attack in the U.S. since 9/11, which brought increased media coverage on its own.⁸¹ Direct influence of the effects of casualty numbers is evident in increased media coverage which meticulously documented the event and its aftermath. Strong media coverage is a positive indicator of demonstrations of solidarity because without that consistent focus on the event, individuals tend to move on from the stressful event. Additional event related narratives, such as gun control, political response

⁸¹ Author's interview with an official from The Law Offices of Ken Feinberg on May 14, 2019. That official credits how violent an act is and the loss of life as the crucial factors when determining charitable giving following a mass casualty event.

and related prosecutions attracted the media and kept the Pulse event in the media cycle. This led to more people learning about the event themselves (and of the vulnerable victim group) which would increase demonstrations of solidarity. Whether or not casualty numbers influence people to demonstrate solidarity is more suited to be empirically studied at the individual level, such as through the experiment and not qualitatively. Casualty numbers were mentioned rarely throughout interviews with members of the community. As the number of injured and property damage was relatively low, it appears that neither of these factors affected demonstrations of solidarity and neither were mentioned prominently when looking through archival sources or through interviews with community organization leaders.

The Effect of the Vulnerable Victim Group

The high demonstrations of solidarity that occurred after Pulse seem to have been directly impacted by the presence of the vulnerable victim group and the effects that victim group had on demonstrations are undeniable. For example, following a 2017 shooting in Las Vegas which resulted in 58 deaths and 851 injuries just over 31 million dollars was raised, while the OneOrlando Fund raised just below 30 million dollars with 49 deaths and 53 injuries (Torres-Cortez 2018; Blake 2018). Many of the same factors discussed impacted the response to the Las Vegas event. However, the victims were at a county music concert, a group of victims not likely to be considered especially traditionally or socially vulnerable.

The presence of the vulnerable victim group increased demonstrations of solidarity mainly through the increased media coverage that followed the event (which informed people of the vulnerable nature of the victims) and through community level LGBT organizations (which facilitated demonstrations from the general public).

Figure 13 below shows Google search trends for Pulse, Orlando Nightclub Shooting Victims, LGBT and Best LGBT Charity from June 2015 to June 2019. Pulse and Orlando Nightclub Shooting Victims have obvious peaks when the event occurred and small increases over the next three years. LGBT has a consistent search pattern with a noticeable increase on the date of the attack. Best LGBT Charity is flat with moments of sharp peaks, one of these being around June 12, 2016 when the attack occurred. The purpose of this figure is to show how people searching for information regarding the incident identified the victim type and searched for related charitable causes. In Pulse and Orlando Nightclub Shooting Victims search records there is an increase when the Las Vegas mass shooting occurred on October 1, 2017. Searches of each of these topics increases again at the anniversary of the event, however, those increases are smaller as more time passes.

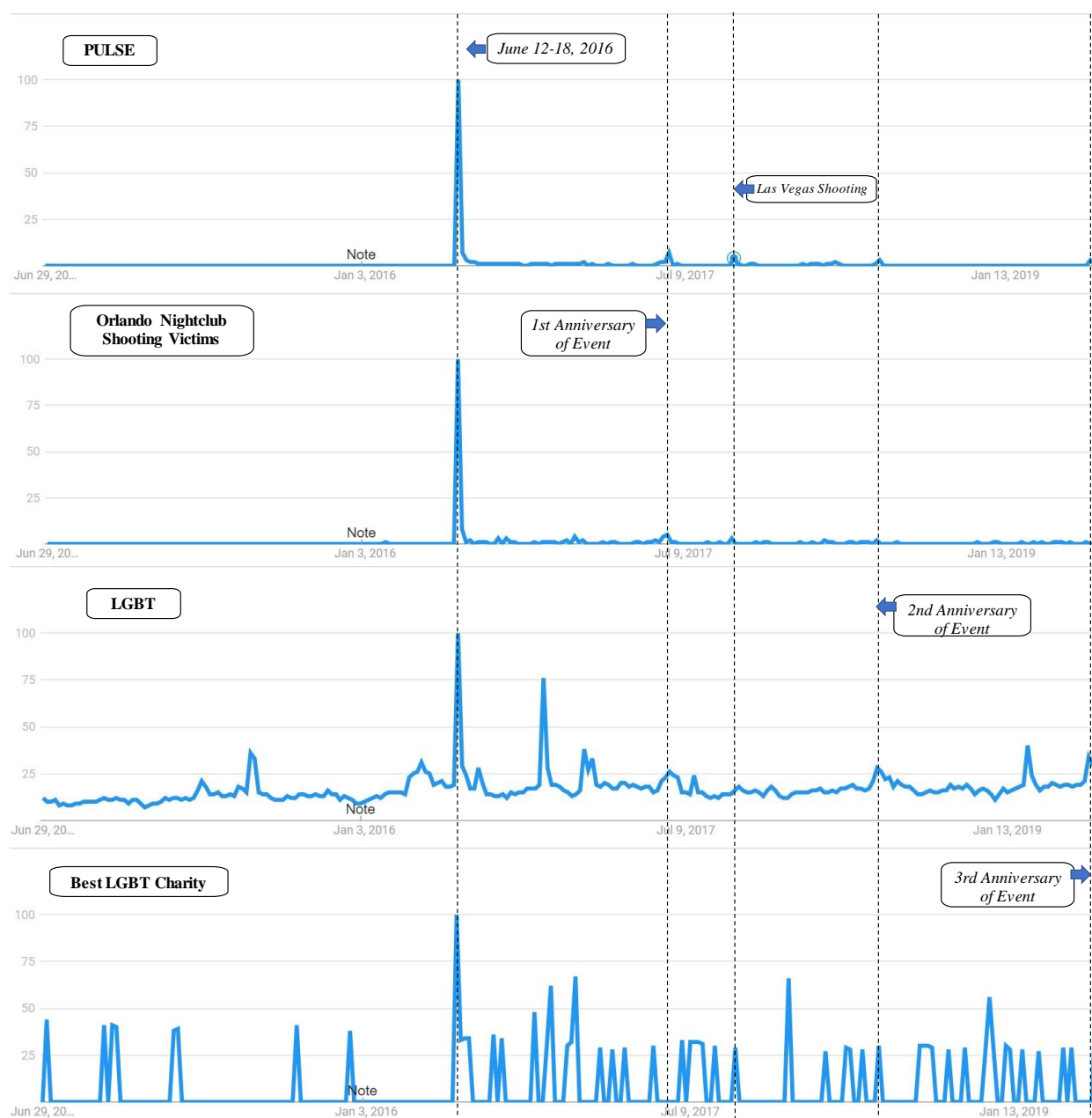


Figure 13: Case #1 Related Search Results

Source: Google Trends

<https://trends.google.com/trends/?geo=US>

Though the attacker scouted other possible locations for his attack, his wife later stated that he showed the Pulse website to her several days before the attack and stated that “this is my target” (Ortiz 2018). Though it appears that Pulse was targeted for being an LGBT

establishment, without a media narrative that included the vulnerable nature of the victims the level of demonstrations of solidarity would likely not have been as high.⁸² However, other factors such as the terrorist nature of the event and casualty number would have brought media attention themselves. President Obama's statement on Pulse and any other media that reflected the victims as being a part of the LGBT community was helpful as it reinforced the narrative that this was an attack on the LGBT community. The public then responded with increased demonstrations of solidarity due to the fact that LGBT people are perceived as a vulnerable group and that sympathy compelled people to demonstrate solidarity with the victims. A unique feature of the LGBT community is that LGBT individuals exist in every subsection of society regardless of race, ethnicity, gender or age which makes them easier to identify and sympathize with across not only Central Florida, but also the remaining U.S. and the world. Previous arguments have blamed the heteronormative nature of media coverage as a reason the LGBT victims weren't featured more and claimed that the media was more fixated on gun control and the political response to the Pulse event (Hancock and Haldeman 2017). Though other narratives were covered, it is important to recognize that these narratives kept the event in the media cycle and the inclusion of the nature of the victims, even minimally, reached more people.

Due to the vulnerable nature of the victims, community level organizations originating from that vulnerable community mobilized and played a major role in organizing and participating in demonstrations of solidarity. LGBT organizations continue to demonstrate solidarity with the victims and, without a specifically vulnerable victim group, the organizing and solicitation processes involved in demonstrating solidarity would have remained in

⁸² An official I spoke with claimed that the original media narrative following Pulse was not accurate and did not specify that the majority of the victims were LGBT or Hispanic but the narrative was soon corrected.

traditional channels (government and non-profit groups). The LGBT organizations that existed prior to Pulse were heavily involved in the acts of solidarity that occurred following Pulse; the groups that formed due to Pulse continue to be involved in not only LGBT activities but general community activities. For example, as The Center was founded in response to the Stonewall riots in 1969 to provide a safe space for gay men, QLatinX was founded in response to Pulse in order to provide services for the LGBT individuals specifically within the Hispanic community. The formation of these new groups as a result of a perceived need is a phenomenon that occurs following a traumatic event within a community.

The Effect of the Institutions

The strong institutional response to this mass casualty event is supportive of hypothesis 4. Demonstrations of solidarity after this event benefited from strong institutions in three ways. First, the role government institutions undertook following the event and the leadership projected by the City of Orlando and Orange County. Government institutions effectively responded to the event and then collaborated with other institutions from very early on. For example, the FAC and FRC were both staffed with the assistance of numerous agencies including other local government institutions (Orange County Health Services, District Nine Medical Examiner's Office, Victims Service Center of Central Florida etc.) and state government institutions (Florida Department of Law Enforcement, Florida Department of Health). Non-profit institutions like the Red Cross also assisted at the FAC and FRC. Local government leadership relayed a strong and consistent message following the attack which set the stage for demonstrations of solidarity to occur untethered by bureaucratic red-tape. Elected officials in Central Florida consistently solicited funds which people within the community became aware of through media coverage.

That leadership was often front and center in the aftermath of Pulse and they expressed a willingness to work with community level institutions (non-profit & specific/LGBT) to show solidarity with the victims and their families. Florida Governor Rick Scott also seemed to respond strongly and promised stronger protections of LGBT people throughout Florida, though that promise was not acted on (Smith 2018). Governor Scott later declared June 12th as “Pulse Remembrance Day” (Wine 2018). The strong governmental institutional leadership response to this mass casualty event and resulting high levels of demonstrations of solidarity is supportive of hypothesis 4a.

Second, non-profit institutions in the greater Central Florida area played a part as well. OneBlood accepted blood product donations with the purpose of providing the best services possible, regardless of the victim type or not. Numerous other organizations such as the RedCross, GoodWill and other general community level institutions responded and provided opportunities for the general public to demonstrate solidarity if they chose to do so. Many of the victims were treated at ORMC and Florida Hospital and neither hospital chose to charge the victims for the services they provided (Domonske 2016). Business institutions in the Orlando area responded strongly and contributed to the recovery process. Both Disney and Sea World released statements condemning the attack and supporting the victims (Farber 2016). Prominent business institutions donated strongly to the OneOrlando fund. Individual institutional representatives demonstrated solidarity with victims on their own. For example, Walt Disney World President George Kalogridis individually donated \$25,000 and continues to serve on the onePulse Foundation Executive Council (onePulse 2019). Other prominent individuals in Central Florida also serve on the onePulse Foundation. Victim type did not impact the response of any of these groups. Many of these organizations collaborated with the LGBT groups and greatly

assisted in demonstrations of solidarity that followed (Geary 2017). Other institutions praised the attack due to the LGBT nature of the victims and did not demonstrate (CBS News 2016; Stack 2019).

Third, the Orlando area had existing LGBT oriented groups that were able to immediately respond to the event. These existing specific institutions became the focal point for many within the community and they allowed for people to demonstrate solidarity easier as they were willing to work with non-LGBT individuals. These specific institutions were already well known within the community and they organized and participated in numerous demonstrations following the event. Fourth, new institutions that were created following the attack are in their own way a demonstration of solidarity. These new groups were formed for a specific purpose and they continue to memorialize the event, accept donations, and assist survivors of the event. The strong specific institutional response to this mass casualty event and resulting strong demonstrations of solidarity is supportive of hypothesis 4b.

Other Effects Upon Demonstrations of Solidarity

The final factor to consider when examining the response to the Pulse event is Orlando's economy. Orlando is one of the most popular tourist destinations in the world and has a higher gross domestic product per capita as compared to the rest of the state and nation. Prosperous economies have successful businesses who become involved in community causes, such as the response to a mass casualty event. For example, six of the OneOrlando Fund board members represented successful businesses in the Orlando area.

Many tourists were probably unaware of Pulse before the incident; however, they had a positive association with the Orlando area due to tourism, entertainment or hospitality which

may have led to a positive association with the area. Once these people became aware of the Pulse shooting, they would demonstrate solidarity with the victims due to that positive association. However, concerns over the Pulse incident, along with the Zika virus and hurricanes, are cited as difficulties for the tourism industry in 2016 (Pedicini 2017). The successful economy in Orlando also made it easier for individuals to demonstrate their solidarity as people had more disposable income (Bracha and Vesterlund 2017).

All these factors impacted the community response to the Pulse event in some way but the role the victim group and institutions had in positively affecting demonstrations of solidarity is undeniable. Though demonstrations of solidarity following a mass casualty event can be strong without a vulnerable victim group, a vulnerable victim group can enhance demonstrations. A crucial aspect in examining this effect is whether or not a group is considered vulnerable. People that are considered traditionally vulnerable (ex. children, elderly etc), and socially disenfranchised or discriminated against groups are likely to be considered vulnerable by society, thus increasing demonstrations of solidarity if they represent the majority of victims of a mass casualty event. For strong demonstrations of solidarity to occur when a vulnerable victim group has been targeted there are two things that must take place. First, the media must characterize the victims and provide information on the victim group. Second, existing specific institutions must participate and organize demonstrations that are open to the general public, not just the vulnerable victim group. A mass casualty event that strikes an area with strong institutions would be likely to have high levels of demonstrations of solidarity. Additionally, a strong government leadership response and specific institution response would lead to high levels of demonstrations. Strong institutions consistently solicit for demonstrations, have strong collaborations across the community and provide methods for anyone who wants to demonstrate solidarity. Findings

similar to these would be likely whenever a mass casualty event strikes a socially vulnerable victim group as the same causal factors would come into play.

San Bernardino, California

Around 8AM on December 2, 2015 approximately 80 employees from the San Bernardino County Environmental Health Department were meeting at the Inland Regional Center for a training seminar. An employee of the department, Syed Rizwan Farook, was present for the majority of the training until around 10:30AM when he got up and left. Coworkers noted that Farook had left his bag on the table so they thought he would be back to retrieve it. Just before 11AM the group took an unscheduled break due to technical issues. Without notice a door opened and an individual dressed in black tactical gear and a mask covering his face stepped inside and opened fire. Workers sprinted for an exit door while others attempted to take cover under tables. A second shooter, also dressed in black tactical gear, entered behind the first and began shooting as well. Between two and three minutes after they first entered, they fled to a black SUV they had waiting outside.

During the initial investigation, a San Bernardino Police Department (SBPD) officer was interviewing a county employee who advised that they seemed to recognize the shooter based on his body language and composition and provided the name Rizwan Farook to authorities. Farook's name and the tag of a suspicious rental black SUV was provided to an SBPD narcotics team and analysts got to work. An analyst found an address in nearby Redlands that the narcotics team went to. As they did, they saw the SUV leaving back towards San Bernardino and they began surveillance in unmarked police vehicles. As Redlands officers converged on the area the occupants of the vehicle began shooting at the officers. Soon after, the vehicle came to a full stop

and both occupants began shooting at the officers with AR-15 style rifles. Farook was killed after being shot multiple times as he tried to flank officers. The other occupant of the vehicle, later identified as his wife, Tafsheen Malik, was killed after a barrage of gunfire struck her and the vehicle.

14 people were dead and 26 more were wounded. 13 of those killed were employees of San Bernardino County. At the time, this shooting was the highest casualty terrorist attack in the United States since September 11. Though many of the victims shared an occupation, they came from a diverse range of backgrounds and they ranged in age from 26 to 60 (Karimi 2015).

Area Descriptors

The Inland Regional Center is located in the southern portion of the city of San Bernardino in San Bernardino County, California. In 2015, the city of San Bernardino had approximately 216,000 people and San Bernardino County had an additional 2 million people.

Economically, San Bernardino had been through tumultuous times. The San Bernardino economy is tied to transportation; the economic agency devoted to San Bernardino county boasts of connectivity to the rest of the Southern California markets via three railroads, three airports and three major interstates (San Bernardino County Economic Development Agency 2019). Economic growth in the area is also sensitive to the wider technology markets. The three most common industries in the county are retail/trade, healthcare/social and manufacturing/transportation (San Bernardino County Economic Development Agency 2019). Amazon and General Electric have a limited presence in the area. In June 2009, the city's economic development agency undertook plans to revitalize the downtown areas into a hub of culture and art.

Poverty rates and unemployment were higher in San Bernardino than the state and nation. GDP per capita and median household income in San Bernardino are significantly lower than the rest of the state and nation (U.S. Census Bureau). Table 13 shows how both San Bernardino County and California are much more racially diverse than the rest of the United States (U.S. Census Bureau). Educational attainment is significantly lower than the rest of the state and nation and crime rates are significantly higher.

In 2012, the city filed for Chapter 9 bankruptcy after it was facing a \$45 million-dollar budget shortfall (Esquivel 2017). After the bankruptcy filing, the city outsourced many of its services and cut staff. Violent crime increased in the city within that time which was attributed to an understaffed police department (Esquivel 2017). Poverty also rose to nearly 33% in this time, again attributed to a lack of public services. This case became the second largest city bankruptcy case ever. In June of 2017, a plan was approved for San Bernardino to emerge from bankruptcy.

Table 11: Case #2 Descriptors

2015	San Bernardino County	California	U.S.
Population	2,128,133	39,144,818	321,418,821
White Only	62.2%	61.8%	73.6%
Poverty	19.0%	15.3%	14.7%
Unemployment	6.4%	6.2%	5.3%
Educational Attainment	19.0%	31.4%	29.8%
Gross Domestic Product per Capita	\$35,108	\$53,855	\$48,538
Median Household Income	\$53,803	\$64,500	\$55,775
Violent Crime (per 100,000)	920.0	426.3	372.6
Property Crime (per 100,000)	5,527.0	2,618.0	2,487.0

Casualties

The majority of violent mass casualty events result in a lesser amount dead than 14.⁸³ At the time, 14 dead as a result of a violent mass casualty event was the highest since the September 11th attacks. The average number of casualties for a violent mass casualty event between 2000 and this event is 11.4. Therefore, this event's casualty number is coded as high because it is higher than the average.

Violence Against Non-Vulnerable Victims

Thirteen of the fourteen victims were county employees and ten of those were environmental health specialists (Karimi 2015; OHS 2015). Most of the victims were known to Farook and worked closely with him.

Certain occupations can be viewed as vulnerable or sympathetic. County government employees such as these are not coded as vulnerable. Occupations are not listed in the Civil Rights Act of 1964 as a protected class alongside traditionally accepted vulnerable groups such as race, color, religion, sex or national origin (Civil Rights Act of 1964). Occupation is also not a protected class in other definitions of discrimination that cover ethnicity, handicaps, sexual orientation or identity. Public services jobs, such as police and fire, do carry increased penalties for crimes committed upon them in the performance of their duties. While inclusion in definitions does not definitively decide whether a group is vulnerable or not, it is a good example of how vulnerable groups are perceived and protected within the United States.

⁸³ Of the 129 mass casualty events that occurred prior to this one, the mean number of casualties is 52.03. Excluding the outliers of the 9/11 terrorist attack and Hurricane Katrina, the mean number of casualties drops to 19.89. There were 49 violent events within the database prior to this event with a mean number of 11.4 casualties.

County government employees were not perceived as vulnerable in this case for two reasons. First, it became known quickly that Farook worked with the victims so it did not appear that they were specifically targeted because they were government employees. While most of the victims of this attack were county government employees, the victims do not appear to have been selected as part of a political statement about the county government, but out of convenience as the perpetrators of this attack knew there would be a large group of people in an easily attackable place. As part of the FBI's investigation, evidence was uncovered showing that both suspects discussed elements of radical Islam which included jihad and martyrdom (Mozingo 2016). After the attack was over, the Islamic State and Levant (ISIL) claimed that both suspects were "soldiers of the caliphate" (Callimachi 2015). As both attackers were inspired by Islamic extremism, it appears indiscriminate mass murder was the objective regardless of who the victims were.

Second, county government employees were not perceived as vulnerable because they do not have a documented history of marginalization and victimization seen in other socially vulnerable groups. Without that documented history of injustices against the victim group, sympathy with the victims was not high. In order to clarify on the vulnerability (or not) of government employees it is important to understand under what circumstances they are specifically targeted and what the usual reactions are when a mass casualty event strikes a group of government employees. The targeting of government employees adds a political dimension to an act of violence, often leading it to be classified as an act of terrorism. For example, the bombing of the Alfred P. Murrah building in Oklahoma City in 1995 which killed 168 people was designed to kill federal employees. The perpetrators, Timothy McVeigh and Terry Nichols both expressed that their motive was perceived federal government overreach, which resulted in

them targeting that building, the home of fourteen federal agencies (Lewis 2000). McVeigh even went so far as to try and minimize non-governmental casualties (Michel and Herbeck 2001). Demonstrations of solidarity occurred after the Oklahoma City Bombing, however, the aforementioned theory suggests that they were mainly the result of the high casualty count and the fact that it was due to terrorism, as the victim group was not seen as especially vulnerable.

The main difference between the Oklahoma City Bombing victims and this incident is the fact that the majority of the victims in Oklahoma City were purposefully selected to be Federal government employees. From 2002 to 2011 almost 96% of violence against government employees was against state, municipal or county employees (Harrell 2013). Excluding law enforcement and security related professions, government employees still face violence at a higher rate than private sector employees (8.7 per 1000 vs. 4.7 per 1000) (Harrell 2013). However, government employees were less likely than private sector employees to face a serious violent crime and were less likely to face someone with a weapon during a violent act (Harrell 2013). The victimization of government employees (and media coverage) does not reach levels to induce a sympathetic reflex amongst common citizens.

In conclusion, it is apparent that the victim group of the San Bernardino terrorist attack is not perceived to be vulnerable. As is the case with many local government offices, the employees of the San Bernardino County Environmental Health Department were a diverse group. Though government employees do appear to be targeted more than others, they are not viewed as a vulnerable group as they do not have a history of persecution or marginalization as seen in other groups based on age, race, ethnicity, sexual orientation etc. While any loss of life is tragic, the demonstrations of solidarity that would follow an incident where a non-vulnerable group is targeted, such as this one, would not be as strong as when a vulnerable group is targeted.

Institutions

The City of San Bernardino uses a council-manager type government. The mayor is a ceremonial position and bureaucratic influence is spread amongst a city council. R. Carey Davis was the mayor of San Bernardino in 2015. He is a certified public accountant by trade and was elected in the wake of the city filing for bankruptcy. His statement in response to the shooting was mainly symbolic and did not mention demonstrations of solidarity of any kind (Davis 2015). Responses from leaders of government institutions in the San Bernardino area are sparse following the attack. Prominent institutions in the area include California State University San Bernardino and numerous non-profit institutions like the Feeding America Food Bank. Additionally, the San Manuel Band of Mission Indians and the Morongo Band of Mission Indians operate casinos in the area and are active in the community. Religious institutions include the Ecclesia Christian Fellowship and several prominent mosques and Muslim institutions. Businesses like Altura Credit Union are active in the community and Amazon and General Electric have a limited presence in the area. LifeStream provides blood products for much of the Inland Empire area. Other nationwide non-profit institutions responded to the incident such as the Salvation Army, who responded quickly and began providing relief services in the family reunification area (Fowler 2015).

The victims in this case were members of workers unions that represented them. In 2015, union membership in California was the fourth highest in the U.S. (BLS 2015). Institutionalism is high within unionized workers and groups like the AFL-CIO and Teamsters were heavily involved with the victims of this event. These groups provide actual representation and services to their members. The victims in this event were both local government workers and members of

the San Bernardino community. As such, they received the benefits of a wide institutional response.

Media Coverage

On December 3, 2015 President Obama released a statement offering sympathies with the victims while also conveying a message of uncertainty regarding whether the event was terrorism or not (Obama 2015). President Obama's messages regarding the event consistently emphasized that the investigation was ongoing but he did ask Congress to prevent people on "no fly lists" from purchasing firearms (Obama 2015). The president's message did not include that the victims were employees of the local government.

The local San Bernardino newspaper *The Sun* had posted its first story regarding the shooting on its website by 2:31PM on December 2nd (*The Sun* 2015). The first story included that a training session for county employees was ongoing at the Inland Regional Center at the time of the attack. The article also cited an anonymous San Bernardino County official who stated that the Department of Public Health was using the facility. Subsequent news coverage of the San Bernardino attack was highly focused on the terrorism aspect, casualty count and the identities of the suspects. The fact that victims were primarily local government employees is included in most of the media regarding this attack. New York Times coverage of the attack includes the casualty number and terrorism aspect of the event (Nagourney, Lovett and Perez-Pena 2015). The fact that the majority of the victims were county government employees is only sparingly mentioned within the New York Times coverage of the event. The Wall Street Journal coverage includes the casualty number and terrorism aspect. However, Wall Street Journal coverage includes that the victims were county government employees much more frequently than the

New York Times (Audi, Barrett and Carlton 2015; Carlton, Barrett and Bustillo 2015; Elinson and Frosch 2015).

The coverage of this attack has been criticized as “hysterical” and “frantic” by observers. The media quickly labelled the event as terrorism related and released several pieces of incorrect information before the last shootout (Carr 2015). Media outlets then gained access to the shooter’s private residence and many broadcasted from inside the townhouse, raising concerns over crime scene contamination and releases of private information (Al-Jazeera 2015).

Two notable developments took place that kept the San Bernardino shooting in the media. The first is the successful prosecution of one of the attacker’s neighbors, Enrique Marquez Jr. He pled guilty to conspiracy to provide material support to terrorists and making false statements to obtain firearms as he purchased and provided both rifles used by the attackers in addition to initially planning the attacks with Farook (Rokos 2017). The second was the legal battle over gaining access to Farook’s county issued Iphone. The FBI believed more information regarding the attack within the phone but were initially unable to gain access to it. The federal courts became involved and ordered Apple to provide access, which they refused. The FBI later gained access to it independently from Apple (Tanfani 2018).

Dependent Variable: San Bernardino Strong

San Bernardino emergency services initially staged victims and witnesses at the San Bernardino Golf Course.⁸⁴ The more than 400 witnesses were then moved to the Rock Church and World Outreach Center so they could be interviewed (Braziel et al. 2015). They were then

⁸⁴ Author’s interview with an official from the county of San Bernardino on June 21, 2019. The emergency operations setup utilized was through the California Office of Emergency Services.

transported to the Ruby C. Hernandez Community Center where they could be reunited with families (Brazier et al. 2015). The San Bernardino County Coroner set up a family assistance center at a nearby hotel for the families of the deceased where they could receive information and behavioral health assistance (Brazier et al. 2015). Local religious organizations self-deployed to the Rock Church and the Hernandez Community Center to try and help victims (Brazier et al. 2015).

The developing nature of the incident caused San Bernardino County Sheriff's Department and San Bernardino Police Department's public affairs units to work together (Brazier et al. 2015). At 11:51AM the San Bernardino County Sheriff's Office Twitter account warned of an active shooter in the area of Orange Show Road and Waterman Avenue and asked people to avoid the area (sbcountysheriff 2015). San Bernardino Police Department Chief Jarrod Burguan also utilized his personal twitter account to post updates on what was occurring throughout the day (Burguan 2015). Chief Burguan's frequent tweeting throughout the day is credited for diffusing several rumors regarding the shooting (Brazier et al. 2015).

Local elected officials also converged on the command post.⁸⁵ Many were looking for information to share with their constituents while others expected to be included in operational plans (Brazier et al. 2015). The SBCSD employs a legislative liaison in order to work with elected officials and this employee was able to provide information to these officials while also informing them of the necessity of confidentiality regarding operational plans. These elected officials also asked if the media would like to interview them but the liaison suggested they stay off camera (Brazier et al. 2015). Soon after the event began unfolding SBCSD set up a telephone

⁸⁵ I attempted to interview several members of both the county and city but did not receive a response to my inquiries.

hotline for people to call looking for information about the victims but the department did not man the phones until later due to the speed at which the event was unfolding (Braziel et al. 2015).

The Inland Regional Center was in very close proximity to many other county level agencies and many of them were on lockdown when the event began to unfold, which slowed their responses.⁸⁶ As the majority of the victims were county employees, many of them were known throughout the local government which amplified the initial trauma.⁸⁷ The county CEO, Greg Devereaux, talked to county department heads twice a day for a month after the attack in order to try and accommodate the trauma of both the community and the government.⁸⁸ The San Bernardino County Behavioral Health Department proactively responded to the area even though their main location was on lockdown due to the attack.⁸⁹ Approximately 300 clinicians were deployed by the Behavioral Health Department within the first 48 hours. They mainly assisted witnesses but also responded throughout the county in order to minimize the shock and any re-traumatization that would happen. The CEO requested that the fallen government employees were treated similarly to whenever another public service member were killed in that a personal liaison was designated for each family of the deceased.⁹⁰ The San Bernardino Behavioral Health Department provided crisis intervention services related to this event for approximately 2.5 years after the event. The department stayed with survivors through multiple re-enactments the FBI put

⁸⁶ Author's interview with an official from the county of San Bernardino on June 21, 2019.

⁸⁷ Author's interview with an official from the county of San Bernardino on June 21, 2019. That official claimed that the shock of knowing many of the victims made the initial response that much more difficult.

⁸⁸ Author's interview with an official from the county of San Bernardino on June 21, 2019.

⁸⁹ Author's interview with an official from the San Bernardino County Behavioral Health Department on June 21, 2019.

⁹⁰ Author's interview with an official from San Bernardino County Behavioral Health Department on June 21, 2019. These liaisons assisted family members with numerous issues such as planning funerals, and occupational issues.

them through.⁹¹ In response to the incident, local government institutions have undertaken more efforts to instill resiliency within the community through education and training.⁹²

Due to the fact that an overwhelming number of victims were health inspectors with San Bernardino County, California Governor Jerry Brown declared a limited state of emergency (Reuters 2015). In that state of emergency Governor Brown claimed that the attack left the county with too few of health inspectors in order to carry out “critical” work so his declaration allows for the state to send in health inspectors as replacements until the county is able to meet normal staffing. (Reuters 2015). The county later approved a \$1.5 million-dollar agreement with the California Association of Environmental Health Administrators to provide almost thirty temporary employees due to the burden put on the county public health and environmental health divisions (Molina 2016). The city of San Bernardino incurred approximately \$1 million dollars in expenses related to the shooting, mainly through added police officer presence and fire department deployment following the attack (Esquivel and Winton 2015).

Vigils and Gatherings of Solidarity

The day after the attack, approximately 2,000 residents gathered at the San Manuel Stadium in downtown San Bernardino and heard Mayor R. Carey Davis speak, praising first responders and claiming that the attack had “forever impacted our community” (Hecht 2015). On December 7th there were two vigils that took place, the first was attended by several hundred people and marked when county employees returned to work (Johnson 2015). The second was

⁹¹ Author’s interview with an official from the San Bernardino County Behavioral Health Department on June 21, 2019. That official emphasized that they expected the FBI to provide clinicians and trauma experts but they failed to do so.

⁹² Author’s interview with an official from the San Bernardino County Behavioral Health Department on June 21, 2019.

when more than a thousand people gathered at nearby California State University San Bernardino in order to honor the victims, five of whom were alumni of the school (Johnson 2015; Goldstein 2015). Another vigil was held on January 6th, which nearly five thousand people attended including a local pastor and former New York Mayor Rudy Giuliani who spoke on resiliency following a terrorist attack (Healy and Kandel 2016; Robinson and Wall 2016). It does not appear that any international reactions to the shooting warranted media coverage except for the Pakistani government offering legal assistance to investigators (Phillip et al. 2015). The San Bernardino Behavioral Health Department deployed clinicians to vigils and gatherings as they feared re-traumatization of survivors.⁹³ Multiple vigils and gatherings occurred following this event, however, many were small in size. Therefore, vigils and gatherings are coded as low for this event.

Fundraising Efforts

Soon after the shooting happened, San Bernardino Mayor Carey Davis set up a GoFundMe page dedicated to the victims with a goal of raising \$100,000 (Lopez 2016).⁹⁴ After 42 months of being open \$137,123 was raised from 1,232 different donors. GoFundMe and the Ahmadiyya Muslim Community each donated \$10,000 (Lopez 2016). GoFundMe also agreed to waive their service fees for the fund (Shultz 2015). Mayor David claimed these funds would be distributed to victims and their families but the exact distribution remains unclear (Lopez 2016).

On December 4, 2015 the San Bernardino County Board of Supervisors and the Arrowhead United Way established the San Bernardino United Relief Fund in order to provide

⁹³ Author's interview with an official from the San Bernardino County Behavioral Health Department on June 21, 2019.

⁹⁴ I attempted to interview a representative from the mayor's office but a response was never received to my inquiry.

an avenue to accept donations that would go to a fund to be given to victims and survivors of the event.⁹⁵ Arrowhead United Way leaders were initially cautious about partnering with the local government due to the bureaucratic nature of government business.⁹⁶ This fund is composed of members of the community including the non-profit sector, law enforcement, faith-based, business, county and labor sectors (Arrowhead United Way 2015). Table 13 below shows San Bernardino United Relief Fund board members (Arrowhead United Way 2015).

Table 12: San Bernardino United Relief Fund Board

Name	Position	Company
Kara Adams	VP of Marketing	Altura Credit Union
Bill Carnegie	President & CEO	Feeding America Food Bank Riverside/San Bernardino
Ray King	Captain	San Bernardino Police Department
Keith Lee	Boardmember	Arrowhead United Way
Vici Nagel	President & CEO	Academy, Go
Laurie Stalnaker	Secretary/Treasurer	AFL-CIO Central Labor Council
Deidre Rodriguez	General Manager	Teamsters Local 1932
CaSonya Thomas	Director	Behavioral Health, San Bernardino County
Dr. Joshua Beckley	Senior Pastor	Ecclesia Christian Fellowship
Taif Kaissi, MD	VP & Executive Director	MiNDS
Steve Kovensky	Deputy Chief	San Bernardino County Sheriff's Department
Patrick Morris	Former Mayor, Judge	City of San Bernardino
Dena Smith	Chief Operating Officer	San Bernardino County
Ken Ramirez	Tribal Secretary	San Manuel Band of Mission Indians
James Siva	Tribal Council Member	Morongo Band of Mission Indians

Within several weeks following the shooting, Ken Feinberg was contacted by San Bernardino officials. He never personally responded to San Bernardino but advised them on how they should respond.⁹⁷ One of the main suggestions of Mr. Feinberg was to get money out quickly to the victims and to conduct townhall meetings in order for the community to feel as

⁹⁵ Author's interview with an official from the county of San Bernardino on June 21, 2019. This official also stated that other donated items, such as children's toys, were sent to the county and were delineated through the relief fund to the appropriate areas.

⁹⁶ Author's interview with an official from the Arrowhead United Way on April 24, 2019. That official credited that partnership for streamlining many processes and giving the fund some credibility.

⁹⁷ Author's interview with an official from The Law Offices of Ken Feinberg on May 14, 2019. That official stated that Mr. Feinberg engaged in two to three telephone consultations but he did not feel the need to personally respond due to the delay and because donations were not as prolific as in other cases.

involved as possible.⁹⁸ Initially, The San Bernardino United Relief Fund’s goal was to raise \$700,000. However, by the time the fund closed one year later they raised approximately \$2,461,000 dollars for distribution amongst the 75 claimants (Gazzar 2015; Final Protocol 2016). Donations came in from all 50 states and numerous other countries and the fund credited the generosity of “businesses, labor unions, foundations, faith communities, tribal councils and individuals” for the raising of the money (Final Protocol 2016).⁹⁹ A local Native American tribe, the San Manuel Band of Mission Indians donated \$350,000 and the Morongo Band of Mission Indians donated \$250,000 to the fund (Yarbrough 2015).¹⁰⁰ ¹⁰¹ More than 1,000 mostly Muslim donors donated approximately \$200,000 through “Your Cause”, an Islam driven method of raising money for different causes. (Gazzar 2015).¹⁰² Another \$100,000 was raised through another mostly Muslim campaign MiNDS, initiated by a local medical doctor (Gazzar 2015). Other significant donations came from Wells Fargo (\$50,000), the Union Pacific Foundation (\$25,000), and Arrowhead Credit Union (\$25,000).¹⁰³

Leaders from the Arrowhead United Way were initially cautious of partnering with local businesses as they believed it could compromise their tax-exempt status.¹⁰⁴ The San Bernardino

⁹⁸ Author’s interview with an official from the Arrowhead United Way on April 24, 2019. That official stated that they conducted townhall meetings and were generally met with support from the community, however, that official noted that there were hecklers at the events who believed the United Way would keep any money raised.

⁹⁹ Author’s interview with an official from the Arrowhead United Way on April 24, 2019. That official was certain that donations had been received from all 50 states but was unsure on exactly which countries donated.

¹⁰⁰ Author’s interview with an official from the Arrowhead United Way on April 24, 2019. Both groups operate successful casinos in the area. That official stated that both groups are very charitable and often donate to the Red Cross after natural disasters.

¹⁰¹ I attempted to interview both the San Manuel Band of Mission Indians and the Morongo Band of Mission Indians but never received a response from my inquiries.

¹⁰² Author’s interview with an official from the Arrowhead United Way on April 24, 2019. That official was unsure as to the exact amount but believed it to be near \$200,000.

¹⁰³ Author’s interview with an official from the Arrowhead United Way on April 24, 2019.

¹⁰⁴ Author’s interview with an official from the Arrowhead United Way on April 24, 2019. That official credits local Congressman Peter Aguilar for providing assistance in dealing with the IRS and maintaining their tax-exempt status.

United Relief Fund received assistance from the United Way across the nation along with the leaders from other areas afflicted by violent mass casualty events.¹⁰⁵ The United Way had previously established relief funds in 2003 and 2007 when fires ravaged the Southern California area. While the expected amount of money to be raised was surpassed, the unorganized methods and lesser amount per victim leads to a coding of low.

Blood Supply Reaction

The vast majority of the casualties were transported to Lomalinda Medical Center and Arrowhead Regional Hospital for emergency medical care.¹⁰⁶ The main supplier of blood and blood products to these medical facilities is LifeStream.¹⁰⁷ Once it became apparent that a mass casualty event had occurred within the community, LifeStream attempted to be proactive in moving products to the correct locations.¹⁰⁸ The Inland Regional Center is less than a mile away from Life Stream's main business location so employees were simultaneously trying to ensure their own safety as the location was locked down due to security concerns (Goldberg 2015).¹⁰⁹ After 9/11, LifeStream evaluated their emergency response plans and consistently revisit logistic issues such as communication and travel after every major event.¹¹⁰ Immediately following the attack there was a surge of donors with some waiting almost three hours to donate blood.¹¹¹ In

¹⁰⁵ Author's interview with an official from the Arrowhead United Way on April 24, 2019. That official specifically noted Newton, Connecticut and Aurora, Colorado as communities they consulted with regarding organizing and distributing funds to victims and survivors.

¹⁰⁶ Author's interview with an official from LifeStream on April 23, 2019.

¹⁰⁷ Author's interview with an official from LifeStream on April 23, 2019. LifeStream covers over 90 hospitals in 6 Southern California counties.

¹⁰⁸ Author's interview with an official from LifeStream on April 23, 2019.

¹⁰⁹ Author's interview with an official from LifeStream on April 23, 2019. That official stated that a "shelter in place" order was issued to employees at that main facility.

¹¹⁰ Author's interview with an official from LifeStream on April 23, 2019. That official stated that they did not believe tabletop exercises were practical for disaster response and did not believe they have the resources available to train specifically for disasters.

¹¹¹ Author's interview with an official from LifeStream on April 23, 2019.

the month following the attack, between ten and eleven thousand units of blood were collected and distributed, a significant increase.¹¹² Demonstrations of solidarity via blood donation increased following the attack, leading to a coding of high.

Union Response

The most common feature of the victims was that they were local government employees. The event occurred while they were working which allowed for local unions to be involved. Additionally, local AFL-CIO¹¹³ and Teamsters representatives were on the San Bernardino United Relief Fund. The Teamsters represent 11,000 public service workers in the San Bernardino area including many of the victims (Deniz 2015). \$250,000 was raised by Teamsters across the nation and donated to the victims of the attack through an independent fund (Robb 2015).¹¹⁴ Survivors of the attack were forced to go through workman's compensation procedures by the San Bernardino county government. This caused a significant amount of stress for survivors as many claims got denied.¹¹⁵ The Southern California Public Service Workers-Service Employees International Union (SEIU 721) was newly formed at the time of the shooting and did not represent any survivors, though they did become more involved in later demonstrations.¹¹⁶ Local unions had a good working relationship with the county when the incident occurred, however, the surge of claims and the bureaucratic nature of the county

¹¹² Author's interview with an official from LifeStream on April 23, 2019. That official stated that there was a significant increase in donations following the shooting.

¹¹³ I attempted to interview a representative from the AFL-CIO but did not receive a response to my inquiry.

¹¹⁴ Author's interview with an official from the Teamsters Local 1932 on May 9, 2019. Teamsters nationwide raise money in response to many disasters across the nation.

¹¹⁵ Author's interview with an official from the Teamsters Local 1932 on May 9, 2019. Many denials stemmed from a change to workman's comp laws in 2005 that made "stress" claims harder to prove.

¹¹⁶ Author's interview with an official from the Teamsters Local 1932 on May 9, 2019. I attempted to interview a representative from SEIU 721 but did not receive a response to my inquiry.

governments response strained relations.¹¹⁷ Free counseling and other services were offered to the county for the survivors but those offers were denied in favor of workman's compensation options.¹¹⁸ Medications and surgeries were not approved by the counties workman's comp, likely out of fear of costs.¹¹⁹ Amanda Gaspard was shot twice during the incident but a year later her surgery and other treatments were denied as they were too expensive and they would not be approved under California's worker's compensation guidelines (Ross, Christie and Blake 2016). The Teamsters provided an example of the Sandy Hook shooting where a school was targeted as an appropriate response by a local government in dealing with a mass casualty event that occurred in a workplace.¹²⁰

Memorialization

A makeshift memorial was set up on the corner of Orange Show Road and Waterman Avenue near where the shooting took place. People left numerous flowers and other personal memorialization's of the victims at this site (Luna 2015). Initially SEIU 721 planned to construct a permanent memorial to the victims outside of the union office in Riverside that was slated to being construction in June of 2016 (Molina 2016). However, the nearly \$2200,000 was raised for the memorial was distributed to victims and the plans were scrapped due to ballooning costs (Shultz 2018). The memorial committee met frequently in 2016 but meetings began to dwindle. Discontent grew with the simple plaque memorial in the Government Center and it was seen as

¹¹⁷ Author's interview with an official from the Teamsters Local 1932 on May 9, 2019. That official noted that the meetings the county held were very bureaucratic and not very helpful.

¹¹⁸ Author's interview with an official from the Teamsters Local 1932 on May 9, 2019.

¹¹⁹ Author's interview with an official from the Teamsters Local 1932 on May 9, 2019. That official claimed that the shooting was considered a single incident and anything over \$1 million dollars the county would have had to pay out of pocket as insurance only covered up until that point.

¹²⁰ Author's interview with an official from the Teamsters Local 1932 on May 9, 2019

not enough to honor those who died (Nelson 2017). According to county Supervisor Josie Gonzales, a memorial to the attack is planned for downtown San Bernardino (Nelson 2017).¹²¹ Upland's Incredible Edible Community Garden has unveiled six memorial groves dedicated to the victims and has plans for eight more to represent each of the victims (Whitehead 2018).

By January of 2016 the Inland Regional Center had reopened for business (De Atley 2016). At the first anniversary of the event, a moment of silence was held at the Inland Regional Center for the victims (Dobuzinskis 2016). A commemoration event drew approximately 2,000 people to an arena in San Bernardino while the survivors and other victims held a private ceremony to mark the occasion (Dobuzinskis 2016). A large gathering occurred at California State University San Bernardino where a memorial and peace garden was dedicated to the memory of the victims (Yarbrough and Hagen 2016). By 2017, the room where the shooting occurred reopened after a brief ceremony (Emerson 2018). Within the Inland Regional Center there are two murals commemorating the event (Emerson 2018). Multiple memorialization's of the event occurred throughout San Bernardino. However, the lack of a large memorialization supported by the survivors and local institutions is glaring and leads to a minimal memorialization coding.

Analysis

In conclusion the data collected through this case study indicates that fewer demonstrations of solidarity occurred following the San Bernardino shooting as a result of the lack of perceived vulnerabilities of the victim group and weak institutional presence in the area.

¹²¹ I attempted to interview a representative from Supervisor Gonzales' office but I did not receive a response to my inquiry.

These results are supportive of hypothesis 3, hypothesis 4, 4a and 4b. The casualty numbers also impacted demonstrations, but to a lesser extent. Figure 14 shows how the facts of the San Bernardino case did not transfer to high demonstrations of solidarity. While a specific group of people were targeted, it was a target of convenience for the attackers and his (government) coworkers were not considered a vulnerable group by the general public. Additionally, the institutions in the area failed to respond strongly which limited the ability for the area to demonstrate solidarity.

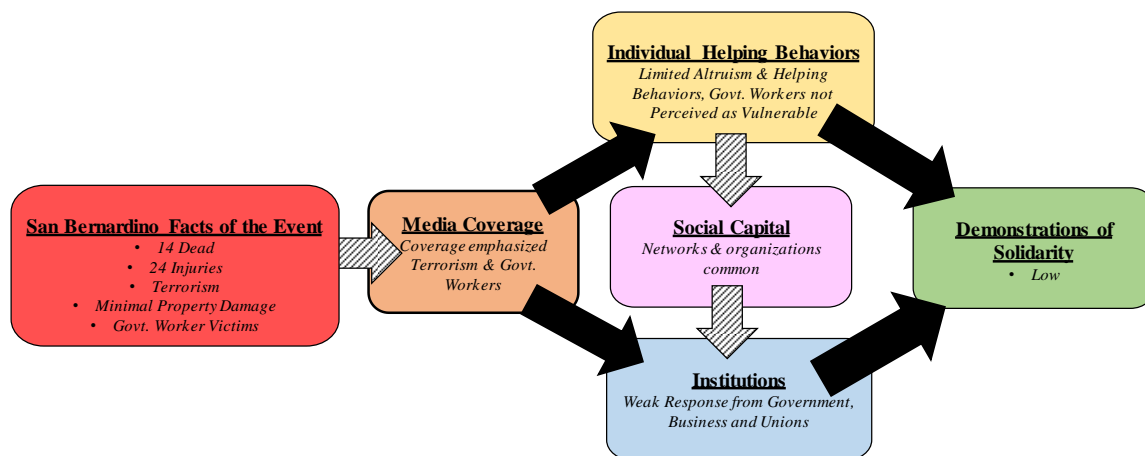


Figure 14: Case #2 Mechanism

The Effect of the Casualty Number

Demonstrations of solidarity seem to have been driven by the number of victims and the type of event as these traits of the event were traumatic enough to attract the media's attention and shock the community into responding. At the time this shooting was the highest loss of life

in a terrorist attack in the U.S. since 9/11, which brought increased media coverage on its own.¹²² Direct influence of the effects of casualty numbers is evident in increased media coverage which meticulously documented the event and its aftermath. Additional event related narratives, such as gun control, political response and related prosecutions, attracted the media and kept this event in the media cycle. This led to more people learning about the event themselves which would increase demonstrations of solidarity. The media was drawn to this event, like many other mass casualty events, due to the violent way in which a significant amount of people lost their lives. As the number of injured and property damage was relatively low, it appears that neither of these factors affected demonstrations of solidarity and neither were mentioned prominently when looking through archival sources or through interviews with community organization leaders.

The Effect of the Victim Group

While San Bernardino and the Inland Empire responded very admirably in the immediate aftermath of the attack, the demonstrations of solidarity seem to have been hampered by several different factors, one being the type of victim group. The lack of a vulnerable victim group led demonstrations of solidarity to take place through general institutions and government bureaucracy. The unions did not organize demonstrations as they provided actual representation to many of the victims. Without a vulnerable victim group, media narratives were driven by terrorism, casualty numbers, gun control discussions and political responses to the shooting. The media narratives that did include victim type were not framed in a way that convinced onlookers that the victim group was vulnerable. For example, these narratives did not include any

¹²² Author's interview with an official from The Law Offices of Ken Feinberg on May 14, 2019. That official credits how violent an act is and the loss of life as the crucial factors when determining charitable giving following a mass casualty event.

discussion on the targeting of government workers or history of marginalization for workers that might convince people that they were vulnerable.

Figure 15 below shows Google search trends for 2015 San Bernardino Attack, San Bernardino Shooting Victims, San Bernardino County Environmental Health and San Bernardino Charities. There are obvious peaks for the first three on the date of the attack, however, there is only a minimal increase for charities. Searches related to charities shows only a minimal increase and there are many moments over this five-year span that has higher number of searches related to San Bernardino charities. There is an increase in the first two searches when the Orlando shooting occurred in June of 2016. Only a minimal increase is registered at the first anniversary of the event and no anniversary of the event after the first registers in these results. These results seem to indicate that there was a rush of interest in the event once it occurred, as is expected. However, it appears that interest wore off fast and did not transfer over onto searching or donating to charities. Other searches concerning the victim type (ex. union, specific charities) did not have enough information to register an increase as shown through these visualizations.

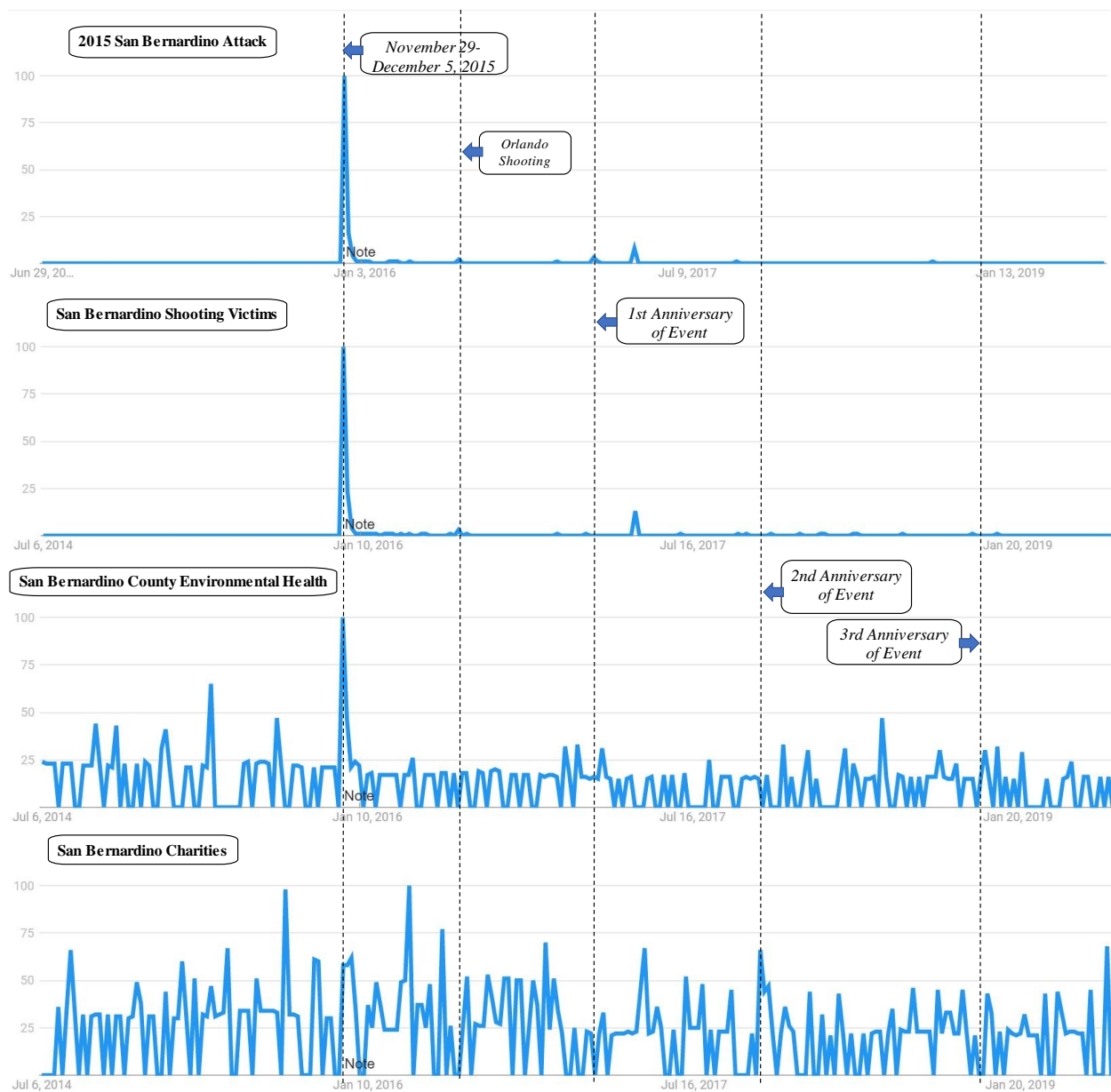


Figure 15: Case #2 Related Search Results
Source: Google Trends
<https://trends.google.com/trends/?geo=US>

The Effect of the Institutions

The institutional response to this event was hampered from very early on. The county fire chief leads emergency response in the region, however, it is believed that someone from law

enforcement would have been more effective.¹²³ Government institutions handled the active shooting aspect appropriately and the incident commander stated that the “first thought was to get dignity back to the victims” (Braziel et al. 2015). However, due to the sheer number of witnesses, it took an extended amount of time for everyone to be interviewed. Once they were taken back to the reunification center, they were forced to walk through a gauntlet of media that had gathered (Braziel et al. 2015). Though counselors were available at both facilities, victims stated that they had difficulty identifying counselors or clergy so no significant services were provided to the victims (Braziel et al. 2015).

Many survivors have complained that the county has failed to provide appropriate services to a survivor of such a traumatic incident (Ross, Christie and Blake 2016; Purper 2018). Government leaders had a very limited response. Mayor Davis spoke on several occasions regarding the incident and personally started the initial GoFundMe effort that raised just over 137 thousand dollars. Local leaders took an appropriate step in contacting Ken Feinberg regarding how they should respond but only seemed to selectively follow his guidance. For example, townhalls were conducted and money was distributed quickly, however, multiple funds existed and the local government only had custody over one.¹²⁴ Union officials working with county officials claimed that those officials often seemed preoccupied and the bureaucratic nature of the government did not assist in dealing with survivors and their needs or

¹²³ Author’s interview with an official from the county of San Bernardino on June 21, 2019. County fire chief leads emergency response because of how common wildfires are. That official credited the fire departments response but believed a fire chief in an active violent situation such as this was not as effective as someone from law enforcement would have been.

¹²⁴ Author’s interview with an official from The Law Offices of Ken Feinberg on May 14, 2019. Mr. Feinberg strongly recommends consolidation of funds into one effort that the local government has direct custody over.

demonstrations of solidarity.¹²⁵ Five members of the San Bernardino United Relief fund represented local government bureaucracies.

Non-profit institutions played a part as well. Blood donations were strong following the event and other general community level institutions responded and provided opportunities for the public to demonstrate. Due to the lack of successful businesses in the area, few business-related institutions responded. For example, only one board member on the San Bernardino United Relief Board was from a local business.

Though not considered especially vulnerable, it is important to note that specific institutions relevant to the victim group did respond. For example, the union response would likely not have been as strong without the victims being government, union covered workers. Unions were handicapped in responding to this mass casualty event for three reasons. The first is that union organizations have existed for many years and were created to protect workers and, though they have a nationwide reach, they did not seem to have as strong of an identity evident in traditionally vulnerable victim groups. The second is that unions traditionally negotiate with different bureaucracies and they may not have the organizational structure to allow for demonstrations of solidarity as seen by specific institutions related to a vulnerable victim group. The final reason is that unions covering the targeted victims were busy providing services to those survivors and the victims' families and organizing and participating in demonstrations of solidarity following a mass casualty event may not have been one of their priorities. In conclusion, the poor institutional response including poor government and specific institutional response is supportive of hypothesis 4, 4a and 4b.

¹²⁵ Author's interview with an official from the Teamsters Local 1932 on May 9, 2019.

Other Effects Upon Demonstrations of Solidarity

The economy of San Bernardino could have had an impact upon demonstrations of solidarity that followed this event. In 2015 the city was in the midst of bankruptcy and one could logically argue that the poor state of the city hampered government led demonstrations. In 2015, California had the highest rate of poverty of any state in the nation. San Bernardino county had a near 20% poverty rate that likely contributed significantly to the lower demonstrations of solidarity as people would have had less disposable income (Sepulvado 2016). The economy in the area is driven by low paying jobs like retail, manufacturing and transportation jobs and the lower gross domestic product per capita compared to the rest of the state and nation reflect that.¹²⁶ There are few prominent businesses in the area and only one local business was represented on the San Bernardino United Relief Fund. Simply put, demonstrations of solidarity often cost money, either directly or from having to take time off work. This would also explain why a costless demonstration, such as donating blood, continued to be high in the area. It is important to recognize that each community is economically very different and these traits affect each community differently. For example, these economic factors can also be seen as a reason the area could be more resilient as coping skills are more common.¹²⁷ Therefore, the incident itself could be perceived as less traumatic, causing fewer demonstrations of solidarity.

There were some reactions to this event that are unique to this case or only exist rarely. For example, two groups contributed to demonstrations of solidarity in the area because they are

¹²⁶ Author's interview with an official from The Law Offices of Ken Feinberg on May 14, 2019. That official strongly believed that the economic state of San Bernardino and surrounding areas kept demonstrations of solidarity from being more prevalent.

¹²⁷ Author's interview with an official from the county of San Bernardino on June 21, 2019. This official believes the recent hardship within the area toughened the people of the area to trauma.

ingrained in society there. First was the San Manuel and Morongo Band of Mission Indians who operate successful casinos in the area. Second was the Little League baseball association as San Bernardino is home to the Western Region offices.¹²⁸ Another seemingly rare phenomena that occurred after this event was the seemingly strong demonstrations of solidarity by the identity group of the attackers. It is unknown why the Muslim community responded so strongly after this attack and no empirical results exist to explain donation behaviors by the suspects identity group. The final noteworthy occurrence following this event is that a new institution was created due to this event after the government failed to respond appropriately in assisting survivors with care. The survivors have banded together, and with legal assistance, have created social networks, such as San Bernardino Survivors Speak Out. This Facebook group is dedicated to the survivors and highlighting the issues they have faced in dealing with the county and their workman's compensation (San Bernardino Survivors Speak Out 2019).

These factors affected how the San Bernardino community responded to the event and it appears that a lack of vulnerable victim group and low institutional response both seem to have affected the lower numbers of demonstrations of solidarity that occurred. A takeaway from this case study should be that a targeted victim does not necessarily equate to a vulnerable victim group. Without the increased media coverage and strong social networks that vulnerable groups bring, the demonstrations of solidarity that followed seemed to be hampered. Weaker institutions do not solicit for demonstrations, have active collaborations across the community or readily provide methods for people to demonstrate solidarity. Findings similar to these are likely

¹²⁸ Author's interview with an official from the Arrowhead United Way on April 24, 2019.

whenever a mass casualty event strikes either a non-vulnerable or random group of victims or areas with low institutionalization.

Conclusion

Results from these case studies are supportive of hypothesis 3 that states when a vulnerable victim group is targeted, higher demonstrations of solidarity will follow. Additionally, results are supportive of hypothesis 4, 4a and 4b which state that higher institutionalization, strong government institutional leadership or a strong specific institution response will lead to more demonstrations of solidarity. These findings are consistent with previous studies that indicate that local level capacity and institutions often play important roles in community recovery following a traumatic event. The presence of the vulnerable victim group and the high levels of institutionalization in the Pulse case study clearly amplified demonstrations of solidarity that followed while demonstrations of solidarity that followed the San Bernardino shooting did not have those benefits. Data regarding the effects of casualty numbers was obtained, however, casualty numbers do not seem to have the same influences on a community as they do individuals. With the variety of other factors influencing demonstrations of solidarity, a true most similar case design would be practically impossible to have.

Throughout these case studies it became apparent that one of the biggest differences in community response to each of these violent mass casualty events is the presence of specific LGBT institutions in Orlando that greatly assisted in demonstrating solidarity there. Without a vulnerable victim group, those LGBT groups likely would not have responded nearly as strong as if a non-vulnerable group were targeted. LGBT people are a historically and recently marginalized group so these groups were still very active, ingrained within the community and

had the means to demonstrate solidarity with the victims on short notice after the Pulse attack occurred. Within San Bernardino, the closest comparison with these specific LGBT groups would be the unions. The biggest difference here, and what may explain some of the differences in response, is that the unions were actively representing the victims in San Bernardino while LGBT groups did not have a direct responsibility to the Pulse victims. These results are strongly supportive of hypothesis 4b which states that a strong specific institutional response will lead to high demonstrations of solidarity.

The level of institutionalization in each case was very different. Orlando had the benefit of not only specific LGBT related institutional response but also a strong general and government institution response. The institutionalization in Orlando was not only high but also very organized which allowed for many demonstrations of solidarity to take place. Mayor Dyer and local government leaders were actively involved in soliciting for demonstrations of solidarity or directly involved in them. San Bernardino's government reacted to the event and set up a fund for victims but their reaction seemed stymied from the beginning. The strong response from Orlando area government institution leaders and the poor response from the San Bernardino leadership is supportive of hypothesis 4a.

The state of the economy in each area could also have influenced demonstrations of solidarity (See Table 8 & Table 11 for statistics). For example, Orlando/Orange County 2016 has an unemployment rate that is lower than the rest of the state and nation while San Bernardino 2015 has an unemployment rate that is higher than rest of California and more than a percentage point higher than the rest of the nation. Poverty in San Bernardino is higher than that in Orlando/Orange County. Gross domestic product per capita is significantly lower in San Bernardino than the rest of California and the nation while gross domestic per capita is

significantly higher in Orlando/Orange County than the rest of Florida and nation. Higher income has been found to directly affect amount and frequency of giving behaviors and a comparison of these cases seems to be supportive of those findings (Bracha and Vesterlund 2013). Median household income is only slightly higher in Orlando/Orange County than Florida but less than the nationwide median household income. In San Bernardino median household income is significantly less than rest of California but still higher than the rest of the nation. The economy in Orlando/Orange County is rooted in tourism and hospitality which brings a significant amount of money into the area and a tax revenue that is used to heighten the quality of life within the area. Additionally, those large companies that operate in Orlando are active members of the community and many demonstrated solidarity with the victims. Though the economy of San Bernardino seems to be improving, it is rooted in manufacturing and transportation which makes economic growth more difficult. The area has a lack of large businesses as seen in Orlando which contributed to the lack of demonstrations in San Bernardino.

Another significant difference is that educational attainment (defined as percentage with a bachelor's degree or higher) is significantly higher in Orlando/Orange County than in San Bernardino. This is consistent with findings that indicate that those with higher education will be more altruistic and donate more (Yen 2002; Andreoni et al. 2003; Bekkers and Wiepking 2011).

The role of trauma fatigue (aka compassion fatigue), defined as the gradual lessening of compassion over time due to consistent exposure to traumatic events, is something that was mentioned when researching these cases.¹²⁹ Again, an important aspect of trauma fatigue is the

¹²⁹ Trauma fatigue was mentioned by several people I interviewed in both cases.

role the media plays. A higher number of casualties (either dead or injured) will attract the media's attention and that consistent coverage can both advise people of an events occurrence while simultaneously exhausting and desensitizing them to violence. In 2015, there were 335 "mass shootings" defined as when four or more people were shot or injured (Gun Violence Archive 2015). Based on this definition, there was another mass shooting in San Bernardino in March of 2015 and 27 other mass shootings throughout California (Gun Violence Archive 2015). In 2016 there were 382 mass shootings, 29 of which occurred in Florida. In Orlando there were two mass shootings in February and another in April (Gun Violence Archive 2016). This data does not seem to indicate that mass shootings articulated in this way cause any kind of trauma fatigue. The number of injured alone has been previously found to not be an influencing factor in donations when compared to fatalities (Evangelidis and Van de Bergh 2013). Two events occurred that could have caused trauma fatigue for San Bernardino. The first was a mass shooting/terrorist event in October of 2015 that resulted in the deaths of ten students in Roseburg, Oregon (Vanderhart, Johnson and Turkewitz 2015). The second was another violent mass casualty event in Isla Vista, California in May 2014 that resulted in the deaths of 6 people (Lovett and Nagourney 2014). Frequency of shootings do not seem to cause trauma fatigue, but the recency of another violent mass casualty event could cause trauma fatigue.

The Google search data used in both case studies indicates the existence of a triggering effect when a mass casualty event occurs. For example, there are visible increases in Orlando related searches when the Las Vegas shooting occurred and visible increases in San Bernardino related searches when the Orlando shooting occurred. While trauma fatigue may have played a role in demonstrations of solidarity, it is important to recognize that demonstrations may have increased for each case as well based on previous mass casualty events potential demonstrators

may have been exposed too. Once a new mass casualty event occurred (Orlando and San Bernardino in this case), these individuals could have been emotionally triggered by the new violence they saw and demonstrated solidarity for the new event.

The San Bernardino community responded resiliently and within their means. However, demonstrations of solidarity were less due to the lack of a vulnerable victim group and a lack of effective institutions. Casualty numbers do however attract media coverage, as it did in both cases, which is a definite predictor of demonstrations of solidarity (Eisensee and Stromberg 2007; Brown and Minty 2008; Oosterhof, Heuvelman and Peters 2009). While casualty number seems to have an impact on demonstrations of solidarity, that variable is much more suited to be examined at the individual level. In conclusion, the biggest difference in explaining the different levels of demonstrations of solidarity between these two cases is that one area had a much higher capacity to deal with a traumatic event. Included in this capacity was the presence of specific institutions that were able to respond when a vulnerable group was targeted. Current emergency management policy stresses the importance of local government capacity in dealing with disasters and these results support those findings, along with hypothesis 3, hypothesis 4, 4a and 4b (Birkland 2009).

CHAPTER 6: CONCLUSION

This dissertation sought to achieve several goals. The first was to apply current social behavior theories and concepts like social capital, community resilience and altruism to explain the behaviors of people following a mass casualty event. Furthermore, it was suggested that these theories and concepts could be used to explain a community's behavior following a mass casualty event, regardless of the source of the event. In operationalizing mass casualty events, a unique typology was provided that divided mass casualty events into four different categories; terrorism and criminal (violent) and weather and accidental (non-violent).

The second goal was to test three related hypotheses through the use of a survey experiment in Chapter 4 while the first, third and fourth hypotheses are also tested using a case study method in Chapter 5:

- ***Hypothesis 1:*** Higher casualty events increase the likelihood of more demonstrations of solidarity.
- ***Hypothesis 2:*** Violent events will result in more demonstrations of solidarity than nonviolent events.
 - ***Hypothesis 2a:*** Terrorist events will cause more demonstrations of solidarity than other event types.
- ***Hypothesis 3:*** Events that harm victims who are perceived as vulnerable will generate more demonstrations of solidarity.
- ***Hypothesis 4:*** Victim communities that have a higher level of institutionalization will have more demonstrations of solidarity following a mass casualty event.

- *Hypothesis 4a*: A strong response from government institution leaders will lead to more demonstrations of solidarity
- *Hypothesis 4b*: A strong specific institutional response will lead to more demonstrations of solidarity.

Experimental results loosely suggest that casualty numbers influence demonstrations of solidarity while there was a minimal relationship between violent event types and demonstrations. Additionally, results suggest that victim type influences demonstrations much more. Altruistic behavior was found to be highly correlative with most of the demonstrations of solidarity tested while group membership was only found to be selectively correlative and often in a direction contrary to the proposed theory.

Results from the case studies support hypothesis 3 as the vulnerable victim group of the Pulse incident played a crucial role in the high demonstrations of solidarity that followed. These in-depth case studies revealed the vulnerability pathways in which vulnerable victim groups affect demonstrations of solidarity. Furthermore, these case studies revealed the two crucial factors that explain the manner in which vulnerable victim groups affect demonstrations of solidarity. First is the role the media plays in covering such events. A media narrative that is inclusive of the victim type is likely to greatly affect following demonstrations of solidarity, supporting the “identifiable victim effect” previously established. Second is the role specific institutions play when a vulnerable victim group is targeted. The mobilization of these identity groups aligned with the victim typology is crucial for an amplified response whenever a vulnerable victim group is targeted. These groups often have an existing base of donors and volunteers that is conducive to demonstrating solidarity in a timely manner and they provide an avenue for common citizens uninvolved with the vulnerable victim group to demonstrate.

Hypothesis 4, 4a and 4b is supported through the case studies as well. Institutions played an important role in the demonstrations of solidarity that followed the Pulse attack in Orlando and institutional support was lacking following the San Bernardino shooting. Government institutional leadership is important because they have a traditional authority in the community and they can solicit for demonstrations of solidarity. Specific institutions are important because they often represent the diverse nature of many communities. Additionally, prominent businesses and non-profit organizations within a community have the capital and ability to organize and participate in large scale demonstrations of solidarity. While some of these results are more supportive than others, there are both theoretical and policy contributions that can be drawn from them.

Theoretical Contributions

Though the sample utilized in the survey experiment was restricted to students, the results suggest that the structure of the experiments are correct and more experiments testing similar hypotheses is needed. In testing an argument reliant on the amount of loss of life in mass casualty events, it would be appropriate to provide respondents with more selections covering a much larger range of loss. Results from this experiment in testing hypothesis one suggests that higher casualty numbers do have a positive effect on demonstrations of solidarity but it failed to reach significant levels in these experiments. Would a more serious event (ex. if 50, 100, 200 people killed) signal to the community that more help was needed, causing higher demonstrations of solidarity? Also, when testing theories related to event type, it appears that event type is significant under specific circumstances. However, results suggest that weather events will lead to more demonstrations of solidarity, not violent events. In order to account for

these changes then different event types need to be examined much more closely. For example, how common are certain events and do other factors affect demonstrations, such as state of emergency declarations? Measuring the effects of a mass casualty event through the use of a survey experiment are inherently difficult as the role of emotion plays an important part in dictating an individual's response, and causing an emotional response through the use of a survey experiment (as opposed to experiencing an event firsthand) is extremely difficult. A larger and more representative sample (including those who have experienced an event) and implementing these other changes would likely lead to results more supportive of the hypotheses.

While results for Hypothesis 3 are very supportive it would still be advisable for future empirical testing with several modifications. Vulnerable groups seem to receive higher demonstrations of solidarity, however further examination between traditional and socially vulnerable groups is needed. Different processes seem to be taking place when traditional and socially vulnerable groups are targeted. The wording of the hypothesis might want to change from *vulnerable* to *sympathetic* as groups may not need to be especially vulnerable in order to have higher demonstrations of solidarity. For example, arguing that specific groups such as law enforcement or soldiers are vulnerable in the same manner than traditionally or socially vulnerable groups is difficult to do. However, these groups are indeed sympathetic and higher demonstrations of solidarity are likely to follow a mass casualty event where they have been targeted. The same mechanisms we saw in the case studies would be evident; an increased and inclusive media coverage and existing networks of social groups based on the identity of the victim groups.

Throughout the experiments conducted, demonstrations of solidarity were measured in five different ways; social media response, volunteer time, blood donation, monetary donation

and event participation. Measurement of demonstrations throughout the case studies were also similarly aligned but not as restricted. While these demonstrations cover a wide range of different types of post mass casualty event behaviors, results suggest it would be beneficial to future researchers to examine each one more closely, particularly psychological motivators behind each one. What factors motivate someone to donate blood as opposed to donating time or money? Findings from the case studies indicate that factors such as availability of demonstration methods and cost are all likely to influence demonstrations. This is most evident in blood donation behavior. Both Orlando and San Bernardino had strong blood donation reactions and representative from both organizations interviewed believe it is because of the availability and low-cost aspect of blood donation.

Experimental results can provide valuable insight into the individual level of decision making regarding demonstrating solidarity following a mass casualty event and qualitative results can provide valuable insight into how a community may demonstrate solidarity following a mass casualty event. A possible future empirical direction in studying this phenomenon is through the use of a large N quantitative study. The nature of quantitative work is strong in terms of validity and the larger samples utilized lead to more generalizable results. The main issue with using a quantitative method to test these theories and concepts is the issue of data availability. The growing reliance on online donations could potentially lead to an abundance of data in time. Community level groups that do the majority of demonstrating solidarity often record inconsistent data regarding those demonstrations. The use of indexes that may not be as closely related to concepts or events measured also often leads to measurement error (King, Keohane and Verba 1994). If data issues could be overcome, a systematic analysis of mass casualty events

using quantitative methods would be able to provide interesting results that would go much further in providing evidence for the theories offered here.

Another interesting next step in related research would be to examine general community behavior as opposed to the strict demonstrations of solidarity as examined here. For example, crime rates were only briefly mentioned in the qualitative chapter of this dissertation. Crime is something that is existent within every community, but does the insertion of a mass casualty event affect those crime rates? Previous research has found a positive relationship between social capital and violent crime (Rosenfeld et al. 2001). Lemieux (2014) found a decline in property crime following a weather event in Canada. He further theorized that donations increased and crime decreased closer to the event epicenter. Is a traumatic, shocking event like a mass casualty event strong enough to affect crime rates within the community they occur in? Theoretically, lower crime rates should indicate a more stable and resilient community so we would expect a community with lower crime rates to respond with higher demonstrations of solidarity. Examining crime and other general community behaviors would help explain if a community responds resiliently or non-resiliently following a mass casualty event.

Policy Contributions

The Federal Response Plan (FRP) of 1992 was often criticized for its lack of engagement of state and local governments (Harrald 2012; Kapucu 2009). Historical emergency management policies did not include the utilization of demonstrations of solidarity that often arise following a mass casualty event. However, since the terrorist attacks of September 11th, emergency management throughout the United States has evolved. As policy changed after Hurricane Katrina and other major events, emergency management has begun to recognize the importance

of local capacity. The “government-centric approach” has been criticized for not properly engaging local communities in disaster recovery (FEMA 2011). Newer policies emphasize the need for collaboration not only across government agencies but also between government agencies and other community institutions. Local governments have been found to play a key role in emergency management and they often collaborate with other local institutions to prepare for and respond to disasters (Kapucu 2012; Waugh 1994). Current emergency management policy seems to be realizing the importance of local capacity and the findings from this dissertation further those ideas. However, these policies do not consider the unique factors of each mass casualty event to tap into the demonstrations of solidarity that could follow. This is likely due to the fact that these types of events are complex and the major motivators to demonstrate solidarity are relatively unknown. If these demonstrations were properly utilized, a great deal of resources could be gathered and put towards the recovery of the community.

Finally, as with any empirical work there is a “why” question. This dissertation and related research provide several important insights into explaining community response to mass casualty events that are applicable to policymakers and the real world. First, better understanding the psychological and organizational behaviors behind demonstrations of solidarity would make it easier to predict the levels in which demonstrations would occur following an event. Second, if a community’s response could be predicted then the appropriate resources could be managed accordingly and a smoother transition back into normalization could take place.

There are several ways in which more supportive and thorough empirical results regarding demonstrations of solidarity following a mass casualty event could influence policy. For example, the resilience of small governed areas (like counties or cities) could be measured preemptively based on different factors. When a mass casualty event impacted that area then

there would be an idea of how that community would demonstrate solidarity. If it was an area with low resilience (expected to respond with low demonstrations of solidarity) then more support could be brought in to help the area become more resilient and demonstrations would increase. Government institutions could preemptively arrange different agreements and relationships with other institutions to provide assistance to the community.

Demonstrations of solidarity are an important step in the healing process a community undergoes following a traumatic event. If assistance could be given to communities to maximize their demonstrating potential then those communities should return to normalization quicker and those bonds of solidarity within that community could be strengthened. While these results are preliminary, they provide important insight into how the facts of a mass casualty event and community institutionalization could influence demonstrations of solidarity.

APPENDIX A: DATABASE

A.1- Database: Accident & Terrorism

County	State	Month	Day	Year	Type	Method	Casualty	Population	Poverty	Unempl	Education	MHI	#White	SoE	SoEPrior	SoETotal	VicVul	Specific Victims?	NAIC813	per Cap	Source		
Edly	NM	08	19	2000	Accident	Pipeline Fire	12	53,907	7.8	5.6	-	-	-	-	-	-	-	-	68	792.8	https://		
Queens	NY	11	12	2001	Accident	Plane Crash	265	2,235,000	12.6	5.3	-	-	-	-	-	-	-	-	1,510	1,480.1	https://		
Cameron	TX	09	15	2001	Accident	Bridge Collapse	8	342,262	24.0	7.8	-	-	-	-	-	-	-	-	256	1,337.0	https://		
Tuscaloosa	AL	09	23	2001	Accident	Mine Explosion	13	78,954	12.8	4.2	-	-	-	-	-	-	-	-	227	347.8	https://		
Gunnison	CO	03	29	2001	Accident	Plane Crash	18	5,417	9.3	3.3	-	-	-	-	-	-	-	-	34	159.3	https://		
Muskogee	OK	05	27	2002	Accident	Bridge Collapse	14	39,126	13.8	5.2	-	-	-	-	-	-	-	-	101	387.4	https://		
Kent	RI	02	20	2003	Accident	Fire	100	171,083	6.7	5.0	-	-	-	-	-	-	-	-	144	1,188.1	https://		
McKenlenburg	NC	01	8	2003	Accident	Plane Crash	21	755,018	12.0	5.7	-	-	-	-	-	-	-	-	755	1,000.0	https://		
Richmond/New York	NY	10	15	2003	Accident	Boat crash	11	1,022,895	14.4	7.5	-	-	-	-	-	-	-	-	5,269	194.1	https://		
Adair	MO	10	19	2004	Accident	Plane Crash	13	24,763	18.2	5.0	-	-	-	-	-	-	-	-	43	575.9	https://		
Henry	VA	10	24	2004	Accident	Plane Crash	10	14,757	13.4	9.5	-	-	-	-	-	-	-	1	205.0	https://			
Los Angeles	CA	01	26	2005	Accident	Train Crash	11	9,804,000	16.2	5.4	27.6	31,312	-	-	-	-	-	-	5,878	1,667.9	https://		
Miami-Dade	FL	12	19	2005	Accident	Plane Crash	20	2,414,000	17.9	3.2	25.2	26,402	-	-	-	-	-	-	1,758	1,373.2	https://		
Dallas	TX	09	24	2005	Accident	Bus Fire	24	2,317,000	34.9	5.7	27.1	30,293	-	1	-	-	23	1	Elderly	1,964	1,179.7	https://	
Aiken	SC	01	6	2005	Accident	Train Crash	9	148,684	15.4	5.9	23.7	31,103	-	-	-	-	-	-	145	1,025.4	https://		
Warren/Essex	NY	10	2	2005	Accident	Boat crash	20	51,759	10.8	4.5	24.5	31,053	-	-	-	-	-	-	70	739.4	https://		
Galveston	TX	03	23	2005	Accident	Explosion	15	57,194	13.3	5.7	26.1	33,944	-	-	-	-	-	-	243	235.4	https://		
Fayette	KY	08	27	2006	Accident	Plane Crash	49	283,324	15.9	4.3	40.7	31,967	-	-	-	-	-	-	336	843.2	https://		
Uphur	WV	01	2	2006	Accident	Mine Explosion	12	23,487	22.1	4.7	-	-	-	-	-	-	-	-	33	711.7	https://		
Fulton	GA	03	2	2007	Accident	Traffic Crash	7	990,790	14.2	4.8	47.2	40,803	-	-	-	-	-	1	college athletes/students	447	2,216.5	https://	
Hennepin	MN	08	1	2007	Accident	Bridge Collapse	13	1,134,000	10.6	4.1	42.6	40,934	-	1	-	-	20	-	1,386	818.2	https://		
Charleston	SC	06	18	2007	Accident	Fire	9	344,506	15.2	5.4	36.6	34,301	-	-	-	-	-	1	firefighters	426	808.7	https://	
San Juan	UT	01	6	2008	Accident	Bus Crash	9	10,629	28.1	5.2	-	-	-	-	-	-	-	-	2	5,314.5	https://		
Los Angeles	CA	09	12	2008	Accident	Train Crash	25	9,779,000	15.3	7.6	28.1	33,229	-	-	-	-	-	-	5,863	1,667.9	https://		
Chatham	GA	02	7	2008	Accident	Explosion	14	251,151	17.0	5.6	29.9	31,893	-	-	-	-	-	-	316	794.8	https://		
New York	NY	03	15	2008	Accident	Crane Collapse	7	1,634,795	16.9	4.9	56.7	52,781	-	-	-	-	-	-	5,096	320.8	https://		
Wayne	MI	07	9	2009	Accident	Train Crash	5	1,926,000	24.2	16.2	19.4	30,809	983,315	-	-	-	-	1	teens	1,409	1,366.9	https://	
Erie	NY	02	12	2009	Accident	Plane Crash	50	909,247	13.9	8.1	30.5	34,550	722,851	-	-	-	-	-	910	999.2	https://		
Westchester	NY	07	26	2009	Accident	Car crash	8	955,962	9.1	7.1	44.1	49,051	571,996	-	-	-	-	-	1,161	823.4	https://		
D.C.	WA	06	22	2009	Accident	Train Crash	9	592,238	17.6	9.3	48.5	47,753	193,359	-	-	-	-	-	3,097	191.2	https://		
San Mateo	CA	09	9	2010	Accident	Explosion	8	719,973	7.0	8.4	43.0	48,664	308,979	-	-	-	-	-	429	1,678.3	https://		
Middlesex	CT	07	7	2010	Accident	Explosion	6	165,628	6.8	7.8	35.1	48,015	142,835	-	-	-	-	-	164	1,009.9	https://		
Raleigh	WV	04	5	2010	Accident	Mine Explosion	29	78,900	18.0	8.1	17.3	28,379	69,125	-	-	-	-	-	88	896.6	https://		
Bronx	NY	03	12	2011	Accident	Bus Crash	11	1,400,000	30.3	11.9	17.4	30,069	154,240	-	-	-	-	-	563	2,486.7	https://		
Washoe	NV	06	24	2011	Accident	Train Crash	6	425,015	13.2	12.6	28.0	35,085	277,641	-	-	-	-	-	322	1,319.9	https://		
Marion	IN	08	13	2011	Accident	Stage Collapse	7	910,861	21.3	9.9	26.1	31,815	542,087	-	-	-	-	-	1,186	768.0	https://		
Kanawha	WV	03	24	2012	Accident	Fire	9	192,102	14.4	6.6	25.7	34,982	169,142	-	-	-	-	1	children	377	509.6	https://	
Cook	IL	06	29	2013	Accident	Porch Collapse	13	5,247,000	17.8	9.6	35.4	38,243	2,275,759	-	-	-	-	-	4,590	1,143.1	https://		
Kemai	AK	07	7	2013	Accident	Plane Crash	10	7,458	10.1	8.0	23.6	38,478	46,328	-	-	-	-	-	85	87.7	https://		
Glenn	CA	04	11	2014	Accident	Bus Crash	10	28,030	17.1	10.6	15.7	29,040	15,244	-	-	-	-	1	College Students	26	1,078.1	https://	
King	WA	09	24	2014	Accident	Vehicle crash	5	2,117,000	11.3	5.0	48.6	47,041	1,275,468	-	-	-	-	1	foreign exchange students	2,217	954.9	https://	
New York	NY	03	12	2014	Accident	Gas explosion	8	1,637,000	16.0	6.1	59.9	57,159	766,835	-	-	-	-	-	5,534	295.8	https://		
Philadelphia	PA	05	12	2015	Accident	Train Crash	8	1,556,000	25.4	7.1	27.4	33,570	557,211	-	-	-	-	-	1,386	1,122.7	https://		
Westchester	NY	02	3	2015	Accident	Train Crash	6	976,396	10.1	4.5	46.9	51,012	535,731	-	-	-	-	-	1,134	861.0	https://		
Webb	TX	05	14	2016	Accident	Bus Crash	8	271,193	30.5	4.9	17.2	26,050	9,264	-	-	-	-	-	88	3,081.7	https://		
Burlison	TX	07	30	2016	Accident	Hot Air Balloon Crash	16	38,066	15.5	4.7	14.8	35,807	11,486	-	-	-	-	-	24	1,586.1	https://		
Hamilton	TN	11	21	2016	Accident	Bus Crash	6	336,463	15.2	4.7	30.7	35,069	251,303	-	-	-	-	1	school children	517	650.8	https://	
Bent	CO	06	26	2016	Accident	Train Crash	5	2,207	36.7	3.1	9.5	28,577	3,411	-	-	-	-	-	4	551.8	https://		
Alameda	CA	12	2	2016	Accident	Fire	36	78,906	11.5	4.2	45.4	47,730	523,797	-	-	-	-	-	1,236	63.8	https://		
Arlington	VA	09	11	2001	Terrorism	Intentional plane crash	125	193,318	4.5	2.4	-	-	-	-	-	-	-	-	321	602.2	https://		
New York	NY	09	11	2001	Terrorism	Intentional plane crash	2,753	1,562,000	14.2	5.6	-	-	-	-	-	-	-	-	4,726	330.5	https://		
Somerset	PA	09	11	2001	Terrorism	Intentional plane crash	40	6,683	10.0	5.9	-	-	-	-	-	-	-	-	152	44.0	https://		
Bell	TX	11	5	2009	Terrorism	Shooting	13	285,787	15.3	6.7	19.8	32,057	150,725	-	-	-	-	1	Troops	240	1,190.8	https://	
Milwaukee	WI	08	5	2012	Terrorism	Shooting	6	599,025	22.5	8.6	28.4	33,439	511,756	-	-	-	-	1	Sikhs	907	660.4	https://	
McLennan	TX	04	17	2013	Terrorism	Anson	15	241,524	20.9	6.1	20.8	30,115	138,872	1	-	-	1	1	firefighters	304	794.5	https://	
Suffolk	MA	04	18	2013	Terrorism	Bombing/Shooting	6	760,364	20.4	6.2	41.8	41,561	350,757	1	-	-	5	-	984	772.7	https://		
Clark	NV	06	8	2014	Terrorism	Shooting	5	2,069,000	15.6	8.0	22.7	33,451	931,696	-	-	-	-	1	cops	700	2,955.7	https://	
Charleston	SC	06	17	2015	Terrorism	Shooting	9	389,262	14.9	4.9	40.4	35,438	235,661	-	-	-	-	1	black church goers	441	882.7	https://	
Hamilton	TN	07	16	2015	Terrorism	Shooting	6	354,098	15.2	5.3	30.3	33,601	249,305	-	-	-	-	1	troops	522	678.3	https://	
San Bernardino	CA	12	2	2015	Terrorism	Shooting	14	214,431	18.9	6.4	19.4	33,300	652,920	-	-	-	-	-	898	238.8	https://		
Orange	FL	06	12	2016	Terrorism	Shooting	49	2,387,138	15.6	4.4	31.9	32,246	543,139	-	-	-	-	1	gay	949	2,515.4	https://	
Dallas	TX	07	7	2016	Terrorism	Shooting	6	2,574,984	17.9	4.0	29.7	33,952	774,653	-	-	-	-	-	1	cops	1,981	1,299.8	https://

A.2- Database: Crime & Weather

County	State	Month	Day	Year	Type	Method	Casualty	Population	Poverty	UnEmpl	Education	MHI	#White	SoE	SoE Prior	SoE Total	VicVul	Specific Victims?	NAIC 813	per Cap	Source
Saint Bernard	LA	08	31	2005	Weather	Hurricane	35	64,951	17.3		10.9	27,367		1	-	66	1	poor/black	32	2,029.7	https://
Harris	TX	09	23	2005	Weather	Hurricane	35	3,732,000	17.9	5.7	27.3	30,750		1	-	23	-		2,387	1,563.5	https://
Walker	TX	09	23	2005	Weather	Hurricane	5	64,330	22.6	5.6				1	-	23	-		46	1,398.5	https://
Hancock	MS	08	31	2005	Weather	Hurricane	50	46,097	15.5	10.8				1	-	44	-		34	1,355.8	https://
Dallas	TX	09	23	2005	Weather	Hurricane	23	2,317,000	34.9	5.7	27.1	30,293		1	-	23	-		1,964	1,179.7	https://
Galveston	TX	09	23	2005	Weather	Hurricane	36	274,494	13.3	5.7	26.1	33,944		1	-	23	-		243	1,129.6	http://v
Jackson	MS	08	31	2005	Weather	Hurricane	12	134,474	15.4	9.9	17.1	28,339		1	-	44	-		130	1,034.4	https://
Harrison	MS	08	31	2005	Weather	Hurricane	126	195,843	16.1	10.8	19.4	26,563		1	-	44	-		194	1,009.5	https://
Orleans	LA	08	31	2005	Weather	Hurricane	1,464	455,188	25.5		31.3	26,926		1	-	66	1	poor/black	458	993.9	https://
Pearl River	MS	08	31	2005	Weather	Hurricane	17	51,764	22.5	9.2				1	-	44	-		53	976.7	https://
Jefferson	TX	09	23	2005	Weather	Hurricane	6	246,063	19.7	7.8	19.6	26,328		1	-	23	-		307	801.5	http://v
Forrest	MS	08	31	2005	Weather	Hurricane	7	75,726	27.7	6.2	24.1	21,011		1	-	44	-		102	742.4	https://
Vanderburgh	IN	11	6	2005	Weather	Tornado	25	173,521	13.4	5.2	21.4	29,680		-	-	-	-		267	649.9	https://
Jones	MS	08	31	2005	Weather	Hurricane	12	65,915	25.0	5.7	12.6	24,253		1	-	44	-		108	610.3	https://
Macon	TN	02	6	2008	Weather	Tornado	13	22,007	20.3	8.3	7.4	22,910		-	-	-	-		11	2,000.6	https://
Harris	TX	09	7	2008	Weather	Hurricane	9	3,981,000	15.3	4.7	27.6	33,893		1	-	16	-		2,411	1,651.2	https://
Sumner	TN	02	6	2008	Weather	Tornado	22	155,704	8.7	6.0	22.6	34,194		-	-	-	-		136	1,144.9	https://
Galveston	TX	09	7	2008	Weather	Hurricane	8	288,489	11.9	5.6	26.4	38,573		1	-	16	-		268	1,076.5	https://
Pike	AR	06	10	2010	Weather	Flood	16	11,236	21.2	9.1	12.4	25,079	9,961	-	-	-	1	children	11	1,021.5	https://
Davidson	TN	05	2	2010	Weather	Flood	10	628,111	17.3	8.2	34.5	32,223	358,845	-	-	-	-	-	992	633.2	http://v
Hale	AL	04	27	2011	Weather	Tornado	6	15,364	28.5	13.8	10.0	23,564	6,337	1	-	35	-		8	1,920.5	https://
Catoosa	GA	04	29	2011	Weather	Tornado	8	64,873	14.4	8.2	18.2	31,377	58,828	-	-	-	-	-	59	1,099.5	http://v
Faulkner	AR	04	25	2011	Weather	Tornado	5	116,308	14.7	7.2	24.8	35,295	91,882	-	-	-	-	-	106	1,097.2	https://
Dekalb	AL	04	27	2011	Weather	Tornado	31	71,387	20.3	11.8	9.9	25,927	58,091	1	-	35	-		67	1,065.5	http://v
Newton	MO	05	22	2011	Weather	Tornado	158	58,823	16.1	8.0	18.1	27,955	50,935	-	-	-	-	-	59	997.0	https://
Jasper	MO	05	22	2011	Weather	Tornado	158	117,853	16.8	7.6	21.4	27,401	100,546	-	-	-	-	-	153	770.3	https://
Monroe	MS	04	27	2011	Weather	Tornado	16	36,544	19.3	12.0	12.6	27,461	25,012	-	-	-	-	-	48	761.3	https://
Tuscaloosa	AL	04	27	2011	Weather	Tornado	44	91,568	20.2	8.3	26.7	33,401	124,560	1	-	35	-		235	389.7	https://
Bertie	NC	04	18	2011	Weather	Tornado	11	20,971	25.1	12.1	10.8	23,697	7,381	-	-	-	-	-	56	374.5	https://
Marion	AL	04	27	2011	Weather	Tornado	7	3,685	25.6	11.2	8.2	24,581	28,497	1	-	35	-		31	118.9	https://
Yavapai	AZ	06	30	2013	Weather	Wildfire	19	215,271	16.4	7.7	24.3	26,797	173,253	-	-	-	1	firefighters	213	1,010.7	https://
Clear Creek/Summit	CO	04	20	2013	Weather	Avalanche	5	18,932	9.2	5.5	43.8	38,683	15,613	-	-	-	-	-	27	701.2	https://
Canadian	OK	05	31	2013	Weather	Tornado	8	6,679	7.3	4.1	24.5	38,046	94,959	-	-	-	-	-	17	392.9	https://
Cleveland	OK	05	21	2013	Weather	Tornado	24	3,230	12.7	4.3	29.8	36,505	195,743	-	-	-	-	-	196	16.5	https://
Snohomish	WA	03	22	2014	Weather	Mudslide	49	759,417	9.9	5.7	29.1	43,272	537,410	1	-	24	-		565	1,344.1	https://
Jefferson	LA	08	31	2005	Weather	Hurricane	30	451,652	15.5		23.0	30,605		1	-	66	1	poor/black	321	1,407.0	https://
Coffee	TN	10	3	2001	Crime	Knife	7	48,544	12.4	4.4				-	-	-	-	-	66	735.5	https://
Montgomery	MD	10	3	2002	Crime	Shooting	5	906,145	4.3	3.5				-	-	-	-	-	960	943.9	http://v
Washburn	WI	11	21	2004	Crime	Shooting	6	16,458	11.4	6.3				-	-	-	-	-	22	748.1	https://
Waukesha	WI	03	12	2005	Crime	Shooting	7	374,989	3.8	3.8	37.2	41,542		-	-	-	-	-	373	1,005.3	http://v
Beltrami	MN	03	21	2005	Crime	Shooting	10	42,653	19.4	5.3				-	-	-	1	high school students	50	853.1	http://r
King	WA	03	25	2006	Crime	Shooting	7	1,832,000	9.6	3.7	44.6	42,579		-	-	-	-	-	2,132	859.3	https://
Lancaster	PA	10	2	2006	Crime	Shooting	5	55,169	9.1	3.5	22.9	32,556		-	-	-	1	Amish/Female Schoolchildren	661	83.5	https://
Forest	WI	10	7	2007	Crime	Shooting	7	9,751	16.5	7.1				-	-	-	1	Students	4	2,437.8	https://
Salt Lake	UT	02	13	2007	Crime	Shooting	5	1,002,000	9.0	2.5	29.3	332,372		-	-	-	-	-	523	1,915.9	https://
King	WA	12	24	2007	Crime	Shooting	6	1,832,000	9.9	3.2	44.0	40,509		-	-	-	-	-	1,027	1,783.8	https://
Douglas	NE	12	5	2007	Crime	Shooting	8	497,292	12.0	3.4	35.6	33,744		-	-	-	-	-	577	861.9	https://
Montgomery	VA	04	16	2007	Crime	Shooting	33	89,284	19.9	3.2	42.4	31,996		-	-	-	-	-	109	819.1	https://
Los Angeles	CA	12	24	2008	Crime	Arson/Shooting	9	9,779,000	15.3	7.6	28.1	33,229		-	-	-	-	-	5,863	1,667.9	https://
Dekalb	IL	02	14	2008	Crime	Shooting	6	106,503	15.6	5.8	8.0	35,749		-	-	-	1	College Students	94	1,133.0	https://
St. Louis	MO	02	7	2008	Crime	Shooting	8	992,331	9.0	6.0	38.7	38,918		-	-	-	1	Government Employees	1,012	980.6	https://
Skagit	WA	09	2	2008	Crime	Shooting	6	118,373	11.4	6.1	24.4	32,740		-	-	-	-	-	142	833.6	https://
Henderson	KY	06	25	2008	Crime	Shooting	5	45,466	11.8	6.1	16.2	30,207		-	-	-	-	-	55	826.7	https://
Pierce	WA	11	29	2009	Crime	Shooting	5	796,836	12.3	9.7	23.7	37,652	572,853	-	-	-	1	cops	634	1,256.8	https://
Broome	NY	04	3	2009	Crime	Shooting	14	194,630	16.3	8.2	26.5	31,195	171,538	-	-	-	-	-	223	872.8	https://
Moore	NC	03	23	2009	Crime	Shooting	8	87,158	13.3	10.1	32.5	27,943	66,740	-	-	-	1	Elderly	110	792.3	https://
Coffee	AL	03	10	2009	Crime	Shooting	6	48,365	15.7	8.5	22.3	31,484	35,268	-	-	-	-	-	67	721.9	https://
Geneva	AL	03	10	2009	Crime	Shooting	5	4,445	19.4	15.3	9.7	22,436	22,036	-	-	-	-	-	25	177.8	http://e
Hartford	CT	08	3	2010	Crime	Shooting	8	895,303	11.3	9.5	34.1	42,267	598,255	-	-	-	-	-	975	918.3	http://v
Orange	CA	10	12	2011	Crime	Shooting	8	3,056,000	13.0	9.1	36.7	41,734	1,339,135	-	-	-	-	-	1,733	1,763.4	http://i
Carson City	NV	09	6	2011	Crime	Shooting	5	54,756	14.8	13.2		52,199		-	-	-	1	Troops	45	1,216.8	https://
Summit	OH	08	7	2011	Crime	Shooting	8	541,281	16.5	9.1	28.1	34,803	433,086	-	-	-	-	-	610	887.3	http://t
Kent	MI	07	7	2011	Crime	Shooting	7	608,111	14.7	8.2	31.5	33,385	458,610	-	-	-	-	-	747	814.1	https://
Pima	AZ	01	8	2011	Crime	Shooting	6	2,382	20.4	8.5	29.1	31,684	542,627	-	-	-	1	Government Employees	646	3.7	http://a
Arapahoe	CO	07	20	2012	Crime	Shooting	12	596,383	10.4	7.7	38.3	41,840	364,766	-	-	-	-	-	282	2,114.8	https://
Fairfield	CT	12	14	2012	Crime	Shooting	28	935,238	8.9	7.8	46.3	47,110	605,569	-	-	-	1	school children	935	1,000.3	http://v
Alameda	CA	04	2	2012	Crime	Shooting	7	1,157,000	13.1	8.7	42.4	45,385	516,893	-	-	-	1	students	1,219	949.1	http://i
King	WA	05	30	2012	Crime	Shooting	6	2,009,000	11.9	7.3	45.9	45,186	1,277,867	-	-	-	-	-	2,210	909.0	https://
Hennepin	MN	09	27	2012	Crime	Shooting	7	1,185,000	13.1	5.2	46.8	41,669	840,845	-	-	-	-	-	1,385	855.6	http://v
Los Angeles	CA	06	7	2013	Crime	Shooting	6	10,005,000	19.0	9.8	30.1	33,247	2,721,								

APPENDIX B: VIGNETTES & EXPERIMENTAL DOCUMENTS

B.1- Vignette 1

Version 1

Imagine that your community was struck by a strong tornado. According to the National Weather Service winds reached well over 200mph as the tornado tore through the area leaving 2 dead and many others injured. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 2

Imagine that your community was struck by a strong tornado. According to the National Weather Service winds reached well over 200mph as the tornado tore through the area leaving 6 dead and many others injured. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 3

Imagine that your community was struck by a strong tornado. According to the National Weather Service winds reached well over 200mph as the tornado tore through the area leaving 23 dead and many others injured. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 4

Imagine that a large car bomb went off in your community killing 2 people and leaving many others injured. The responsible party was apprehended leaving the area and the incident is currently being investigated by Federal authorities as an act of terrorism. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 5

Imagine that a large car bomb went off in your community killing 6 people and leaving many others injured. The responsible party was apprehended leaving the area and the incident is currently being investigated by Federal authorities as an act of terrorism. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 6

Imagine that a large car bomb went off in your community killing 23 people and leaving many others injured. The responsible party was apprehended leaving the area and the incident is currently being investigated by Federal authorities an act of terrorism. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

B.2- Distractor Question 1

Question 1: On the next screen you will be asked to rank the first four U.S. presidents in chronological order

Rank the first four U.S. presidents in chronological order

_____ Thomas Jefferson (1)

_____ John Adams (2)

_____ James Madison (3)

_____ George Washington (4)

Question 2: On the next screen you will be asked to rank the last four U.S. presidents with the most recent first

Rank the last four U.S. presidents with the most recent scored the lowest.

_____ William J. Clinton (1)

_____ Donald J. Trump (2)

_____ George W. Bush (3)

_____ Barack H. Obama (4)

B.3- Vignette 2

Version 1

Imagine that your community was struck by a strong tornado. According to the National Weather Service winds reached well over 200mph as the tornado tore through the area. The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 2

Imagine that a large car bomb went off in your community. The responsible party was apprehended leaving the area and the incident is being investigated by Federal authorities as an act of terrorism. The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 3

Imagine that a four-lane bridge lost structural integrity during local rush hour and collapsed within your community. The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 4

Imagine that a mass murder occurred in your county. An individual shot and killed several people during an attempted bank robbery which turned into a hostage situation. The responsible individual was later taken into custody by local law enforcement and charged with the attempted robbery and numerous murder charges for the deaths he caused. The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

B.4- Distractor Question 2

Question 1: On the next screen you will be asked to complete the numerical sequence

What comes next in the numerical sequence:

1 4 9 16 25 ____

29 (1)

33 (2)

36 (3)

39 (4)

Question 2: On the next screen you will be asked to complete the numerical sequence

What comes next in the numerical sequence:

-2 5 -4 3 -2 ____

0 (1)

1 (2)

2 (3)

3 (4)

B.5- Vignette 3

Version 1

Imagine that a mass murder occurred in your county. An individual shot and killed several people during an attempted bank robbery which turned into a hostage situation. The responsible individual was later taken into custody by local law enforcement and charged with the attempted robbery and numerous murder charges for the deaths he caused, mostly school children who were at the bank for a field trip. The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 2

Imagine that a mass murder occurred in your county. An individual shot and killed several people during an attempted bank robbery which turned into a hostage situation. The responsible individual was later taken into custody by local law enforcement and charged with the attempted robbery and numerous murder charges for the deaths he caused, seemingly random bystanders. The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 3

Imagine that a four-lane bridge lost structural integrity during local rush hour and collapsed within your community. Victims are mainly school age children who were on several different school buses. The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

Version 4

Imagine that a four-lane bridge lost structural integrity during local rush hour and collapsed within your community. Victims were seemingly random commuters. The area is devastated and the incident is being treated as a mass casualty event due to the number dead. The community is struggling to heal and many organizations are on scene to assist and relief efforts are underway.

B.6- Response Questions

Question 1: In the week following the event, would any of your social media activity (Facebook, Twitter, Instagram etc.) be in response to the event? (ex. Posts/hashtags related to event, marking yourself as “safe,” changing pictures etc.)

Yes (1)

No (2)

Not involved with social media (3)

Question 2: If you had two hours of free time in the week following the event, how much of that time would you devote to relief efforts? (Out of 120 minutes)

_____ Total Time Spent (1)

Question 3: Would you donate blood in the week following the event?

No (1)

Yes (2)

Question 4: If you had \$100 in the week following the event that you were not using for anything else, how much (if any) would you donate to a charitable or relief effort related to the event? (Out of 100 dollars)

_____ Total Money Spent (1)

Question 5: Would you attend a large group event immediately following the event meant to show solidarity with the victims and community? (Ex. candlelight vigil)

Yes (1)

No (2)

B.7- Demographic/Introductory Questions

How old are you?

What is your sex?

Male (1)

Female (2)

No Sex (3)

Prefer not to answer (4)

What is the highest level of school you have completed or the highest degree you have received?

Less than High School (1)

High school graduate or equivalent (ex. GED) (2)

Some college (3)

Associates (2 year degree) (4)

Bachelors (4 year degree) (5)

Master's Degree (6)

Doctorate (7)

Professional Degree (MD, JD etc.) (8)

Describe your income (before taxes)

less than \$30,000 (1)

\$30,000-\$39,999 (2)

\$40,000-\$49,999 (3)

\$50,000-\$59,999 (4)

\$60,000-\$69,999 (5)

\$70,000-\$79,999 (6)

\$80,000 or more (7)

On the scale below indicate your political leanings

On the scale below indicate your political leanings

Far Left					Independent						Far Right
0	1	2	3	4	5	6	7	8	9	10	
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	

How often do you attend religious services weekly?

None (1)

1 (2)

2-3 (3)

More than 3 (4)

How many social, civic or organizational groups are you a member of? (ex. Alumni associations, charitable/neighborhood groups, fraternities/sororities etc.)

None (1)

1 (2)

2-3 (3)

More than 3 (4)

Would you go out of your way to do something nice for a stranger?

Very Often (1)

Often (2)

Occasionally (3)

Not Often (4)

Never (5)

Have you ever experienced an event where a large number of people were killed in a single incident? (including military service)

No (1)

Experienced firsthand (2)

Knew someone who was a victim and survived (3)

Knew someone who was killed during an event (4)

People often respond to an event or occurrence (such as disasters, assassinations, attacks, strikes, injustices etc.) in ways that reflect support for the afflicted community. Examples include something as simple as social media support to participating in charitable events to devoting time and effort to aid the victims and community.

You will now face the first of three different imaginary scenarios. You will then face a series of questions regarding your response to the events that take place within your scenario. Some of your scenarios may seem to be closely related so read carefully and answer truthfully. You are free to quit at any time.

B.8- Explanation for Exempt Research



EXPLANATION OF RESEARCH

Title of Project: Measuring Responses to Mass Casualty Events: A Survey Experiment

Principal Investigator: Jeffrey Payne

Faculty Supervisor: Dr. Roger Handberg

You are being invited to take part in a research study. Whether you take part is up to you.

- The purpose of this research is to measure the reactions individuals have to mass casualty events based on three different variables; the type of event, the number of casualties and the type of victim.
- You will be asked to participate in a survey experiment administered through Qualtrics. Participants will first answer several standard demographic questions, followed by three questions related to social capital, altruism and prior experiences with mass casualty events. Participants are then given three imaginary scenarios. After each scenario they will be asked to answer five questions based on how they would respond to the scenario they were given.
- Estimated time to complete: 25 minutes

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints please contact Jeffrey Payne, PhD Candidate, Department of Political Science, College of Sciences, HPH 313, Jeff.payne73@knights.ucf.edu; or Dr. Roger Handberg, Professor, Department of Political Science, College of Sciences, HPH 302, roger.handberg@ucf.edu.

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been determined to be exempted from IRB review unless changes are made. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901.

B.9- Experiment IRB Approval Letter



University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Determination of Exempt Human Research

From: UCF Institutional Review Board #1
FWA00000351, IRB00001138

To: Jeffrey Payne

Date: May 17, 2018

Dear Researcher:

On 05/17/2018, the IRB reviewed the following activity as human participant research that is exempt from regulation:

Type of Review: Exempt Determination, Category 2
Project Title: Measuring Responses to Mass Casualty Events: A Survey
Experiment
Investigator: Jeffrey Payne
IRB Number: SBE-18-13901
Funding Agency:
Grant Title:
Research ID: N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the [Investigator Manual](#).

This letter is signed by:

A handwritten signature in blue ink that reads "Renea C Carver".

Signature applied by Renea C Carver on 05/17/2018 10:41:33 AM EDT

Designated Reviewer

B.10- Pearson's Correlation Table of Descriptive Variables

	Age	Sex	Education	Income	Politics	Religion	Altruism	PriorMCE
Age	1.00							
Sex	0.0715	1.00						
Education	0.4963	-0.1222	1.00					
Income	0.5626	-0.0044	0.3375	1.00				
Politics	0.0621	-0.1357	0.1273	0.1201	1.00			
Religion	0.0562	0.0348	0.0788	0.1495	0.1804	1.00		
Altruism	0.0226	0.1018	-0.0704	-0.0676	-0.1241	0.0929	1.00	
Prior MCE	0.2051	-0.0632	0.0088	0.1326	-0.0017	-0.0053	0.0859	1.00

B.11- Factor Analysis Matrices

Experiment 1

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	1.69	0.55	0.33	0.33
Factor2	1.13	0.30	0.23	0.56
Factor3	0.83	0.13	0.16	0.73
Factor4	0.69	0.04	0.14	0.87
Factor5	0.65	-	0.13	1.00

LR test: independent vs. saturated: $\chi^2(10) = 61.01$ Prob> $\chi^2 = 0.00$

Variable	Factor1	Factor2	Uniqueness
Social Media	-0.513	0.63	0.33
Time	0.6	0.31	0.53
Blood	0.42	0.57	0.49
Money	0.69	0.28	0.44
Event	-0.63	0.47	0.37

ROTATE

Factor	Variance	Difference	Proportion	Cumulative
Factor1	1.45	0.08	0.29	0.29
Factor2	1.36	-	0.27	0.56

LR test: independent vs. saturated: $\chi^2(10) = 61.01$ Prob> $\chi^2 = 0.00$

Variable	Factor1	Factor2	Uniqueness
SocialMedia	0.02	0.81	0.33
Time	0.66	-0.15	0.54
Blood	0.69	0.15	0.49
Money	0.71	-0.23	0.44
Event	-0.17	0.77	0.37

	Factor1	Factor2
Factor1	0.75	-0.65
Factor2	0.65	0.75

PREDICT

Variable	Factor1	Factor2
SocialMedia	0.13	0.62
Time	0.45	-0.02
Blood	0.52	0.22
Money	0.47	-0.75
Event	-0.01	0.56

Experiment 2

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2.15	1.24	0.43	0.43
Factor2	0.90	0.12	0.18	0.61
Factor3	0.78	0.15	0.15	0.76
Factor4	0.62	0.10	0.12	0.89
Factor5	0.52	-	0.10	1.00

LR test: independent vs. saturated: $\chi^2(10) = 126.36$ Prob> $\chi^2 = 0.00$

Variable	Factor1	Uniqueness
Social Media	-0.60	0.63
Time	0.75	0.42
Blood	0.50	0.75
Money	0.71	0.49
Event	-0.69	0.52

ROTATE

Factor	Variance	Difference	Proportion	Cumulative
Factor1	2.15	-	0.43	0.43

LR test: independent vs. saturated: $\chi^2(10) = 126.36$ Prob> $\chi^2 = 0.00$

Variable	Factor1	Uniqueness
SocialMedia	-0.60	0.63
Time	0.75	0.43
Blood	0.50	0.75
Money	0.71	0.49
Event	-0.69	0.52

Factor1

Factor1	1.00
---------	------

PREDICT

Variable	Factor1
SocialMedia	-0.28
Time	0.34
Blood	0.23
Money	0.32
Event	-0.32

Experiment 3

Factor	Eigenvalue	Difference	Proportion	Cumulative
Factor1	2.38	1.56	0.47	0.47
Factor2	0.83	0.06	0.16	0.64
Factor3	0.77	0.20	0.15	0.80
Factor4	0.56	0.11	0.11	0.91
Factor5	0.45	-	0.09	1.00

LR test: independent vs. saturated: $\chi^2(10) = 179.37$ Prob> $\chi^2 = 0.00$

Variable	Factor1	Uniqueness
Social Media	-0.64	0.58
Time	0.76	0.42
Blood	0.53	0.72
Money	0.76	0.42
Event	-0.73	0.46

ROTATE

Factor	Variance	Difference	Proportion	Cumulative
Factor1	2.38	-	0.47	0.47

LR test: independent vs. saturated: $\chi^2(10) = 179.37$ Prob> $\chi^2 = 0.00$

Variable	Factor1	Uniqueness
SocialMedia	-0.64	0.58
Time	0.76	0.42
Blood	0.53	0.72
Money	0.76	0.42
Event	-0.73	0.46

Factor1

Factor1	1.00
---------	------

PREDICT

Variable	Factor1
SocialMedia	-0.27
Time	0.32
Blood	0.22
Money	0.32
Event	-0.30

APPENDIX C: QUALITATIVE

C.1- Explanation of Exempt Research



UNIVERSITY OF
CENTRAL FLORIDA

EXPLANATION OF RESEARCH

Title of Project: Measuring Responses to Mass Casualty Events: Qualitative Interviews

Principal Investigator: Jeffrey Payne

Faculty Supervisor: Dr. Roger Handberg

You are being invited to take part in a research study. Whether you take part is up to you.

- The purpose of this research is to measure how a community level organizations respond to mass casualty events in terms of demonstrations of solidarity the organization organized or participated in.
- You will be asked to participate in a face to face semi-structured interview where you will be asked questions regarding your identity, organization you are a part of, role your organization had in the community prior to the event, role your organization had in responding to the event, your perceptions of how the event impacted the community, the portrayal of the event in the community etc.
- Participants are allowed to withdraw at any time during the interview and you will not be audio/video recorded. Your contact information was found online. All identifiers will be deleted after transcription of notes and any de-identified data will be retained for a minimum of 5 years (per UCF policy).
- Estimated time to complete: 20 minutes-1 hour

You must be 18 years of age or older to take part in this research study.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints please contact Jeffrey Payne, PhD Candidate, Department of Political Science, College of Sciences, HPH 313, Jeff.payne73@knights.ucf.edu; or Dr. Roger Handberg, Professor, Department of Political Science, College of Sciences, HPH 302, roger.handberg@ucf.edu.

IRB contact about your rights in this study or to report a complaint: If you have questions about your rights as a research participant, or have concerns about the conduct of this study, please contact Institutional Review Board (IRB), University of Central Florida, Office of Research, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901, or email irb@ucf.edu.

C.2- Qualitative IRB Approval Letter



UNIVERSITY OF CENTRAL FLORIDA

Institutional Review Board

FWA00000351
IRB00001138
Office of Research
12201 Research Parkway
Orlando, FL 32826-3246

EXEMPTION DETERMINATION

April 16, 2019

Dear Jeffrey Payne:

On 4/16/2019, the IRB determined the following submission to be human subjects research that is exempt from regulation:

Type of Review:	Initial Study, Exempt Category
Title:	Measuring Responses to a Mass Casualty Event: Qualitative Interviews
Investigator:	Jeffrey Payne
IRB ID:	STUDY00000337
Funding:	None
Grant ID:	None

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made, and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request so that IRB records will be accurate.

If you have any questions, please contact the UCF IRB at 407-823-2901 or irb@ucf.edu. Please include your project title and IRB number in all correspondence with this office.

Sincerely,

Kamille Chaparro
Designated Reviewer

C.3- Interview Instrument

Semi-Structured Interview Questions Examples:

1. What is your name, job title, job description?
 - a. What was your job title at the time of the incident?
2. What does your organization do?
 - a. How does your organization work with existing partners within the community?
3. What was your organizations role in the community before the incident?
 - a. If organization did not exist then question is omitted.
 - b. How did your organization form?
 - c. Did existing members of the community assist in forming the organization?
4. How did the incident change your organizations role in the community?
5. What did your organization do regarding the incident?
6. Whose idea was it to respond in that way?
7. Was your organization prepared in responding to such an event?
 - a. How did the community as a whole react to the event?
 - b. What role did the media have in the event?
 - c. Was your organization asked to assist following the event or did you do so on your own?
8. What are some of the lessons your organization learned regarding how to respond to such an event?
 - a. If another mass casualty event where to take place within your community, how do you think your organization would react differently?
9. How do you feel the community responded overall?
10. What do you think impacts community response to such events?
 - a. Other experience with disasters/MCE's

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