

University of Nevada, Reno

College Students' Psychological Well-Being & Resource Use in Response to the Las Vegas Shooting

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by

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Abstract

The purpose of this project is to examine the psychological impact that the October 1, 2017 mass shooting in Las Vegas had on students attending the University of Nevada, Reno. Levels of psychological distress before and after the shooting were collected using the *Impact of Events Scale-Revised* (Weiss, 2007). Awareness and use of on-campus resources after the shooting, and perceptions about the most beneficial services were collected as well by use of a survey. Participants who had a relationship to the festival at which the shooting occurred and/or Las Vegas experienced more psychological distress on average in comparison to those who had no connection to the festival and Las Vegas. Many respondents were aware of all resources offered, yet utilization rates were low. The most utilized resources by participants were those that unified the community, such as the candlelight vigil. Continued research on responses and supports provided by universities and colleges across the United States after a traumatic event impacted their community can assist in the development of a plan for administrators, faculty, and staff to utilize to ensure their students' needs are appropriately and adequately being met.

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Table of Contents

Abstract	i
Acknowledgements	ii
Table of Contents	iii
List of Tables	v
List of Figures	vi
Chapter 1: Introduction	1
The Current Study	3
Chapter 2: Literature Review	6
Psychological Consequences of Mass Shootings	8
Indirect Exposure to Trauma	10
Coping & Resources	12
Universities/Colleges Response to Traumatic Events	14
Usefulness and Utility of University/College Responses	17
Summary	18
Chapter 3: Methods	20
Participants	20
Measures	22

Proximity to Event	23
Impact of Events Scale	24
Awareness, Participation, and Usefulness of Campus Resources	25
Demographics	26
Procedures	27
Chapter 4: Results	29
Research Objective 1	29
Research Objective 2	30
Research Objective 3	33
Chapter 5: Discussion	35
Research Objective 1	35
Research Objective 2	36
Research Objective 3	39
Limitations	40
Future Research	40
References	42
Appendix A: The Survey	48
Appendix B: The Impact of Event Scale-Revised	55

LIST OF TABLES

Table 1:	Race/Ethnicity of Participants	20
Table 2:	College Representation of Participants	21
Table 3:	Awareness and Use of UNR Resources Immediately Following the LV Shooting	31
Table 4:	Most Helpful Resource to Participants	31
Table 5:	Most Helpful Support to Participants	32
Table 6:	Participants' Responses on if UNR Responded Adequately & Appropriately to Students' Needs	34

LIST OF FIGURES

Figure 1:	Relation Between Proximity to Event and IES-R	30
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CHAPTER 1

INTRODUCTION

On October 1st, 2017, a gunman opened fire on the Las Vegas strip at the *Route 91 Harvest Festival*, a three-day outdoor country music gathering. About 22,000 people of all ages from around the world attended this festival. On the final evening of the event at 10:08 p.m., the gunman fired into the crowd from his hotel room. He fired for 10 to 15 minutes uninterrupted before pulling the trigger on himself, leaving at least 58 people dead and over 500 injured (Yan & Park, 2017). The shooting was traumatic for many who attended the festival and had the potential to traumatically affect many citizens of Nevada, as loved ones were lost or injured, and their home state was attacked.

Traumatic events, such as terrorist attacks, natural disasters, sexual assault and mass shootings impact an individual's psychological well-being immensely. Those exposed to trauma can suffer from an array of mental health disorders including Major Depression, Generalized Anxiety Disorder, Panic Disorder, substance abuse disorders, and Post-Traumatic Stress Disorder (PTSD), which is the most prevalent disorder (Lowe & Galea, 2017). Symptoms of such disorders can appear in individuals days to weeks after the traumatic event occurred and can remain present even years after the trauma was experienced (Hughes, et. al., 2011). The severity and seriousness of trauma symptoms stresses the importance of recognizing such symptoms as early as possible in individuals who were exposed to trauma, either directly or indirectly, to ensure proper treatment can be given to them immediately to reduce the chance of long-term psychological complications due to the trauma (Lowe & Galea, 2017).

Even in the absence of trauma, college students are at a higher-risk for developing

mental health issues than older adults (Watkins, Hunt, & Eisenberg, 2012). They are faced with an increase of independence, stress from an abundance of new responsibilities, and the choices that come with navigating through this transition of life (Watkins, Hunt, & Eisenberg, 2017). In 2009, one in three college students reported that depression impacted their daily functioning at least once during the school year (American College Health Association, 2009). Mental health problems are increasing in college students (Watkins, Hunt, & Eisenberg, 2012), and trauma exposure in college students is increasing as well (McGowan & Kagee, 2013).

In 1994, one study found that 84% of college students experienced at least one traumatic event that was severe enough to cause PTSD (Vrana & Lauterbach). In a more recent study, 67% of college students experienced a traumatic event and 59% of them met the diagnostic criteria for PTSD (Elhai et. al., 2012). Trauma is common in the college student population, yet not much is known about how factors, such as physical and psychological proximity to the traumatic event, affect the degree to which the students' psychological well-being is impacted. This increase in trauma exposure in college students stresses the need for more research to better understand the impact trauma has on college students and efficient responses and resources offered to them by their communities.

Responses from college and universities in the wake of a traumatic event are crucial to their students' psychological well-being and healing process (Ashburn, Lipka, & Hoover, 2007). Due to the infrequency of such large-scale traumatic events like the Las Vegas shooting there is no gold-standard of responses or list of "best practices" for colleges and universities to follow when such an event occurs (Schwartz & Kay, 2009).

However, research has shown that offering counseling and advertising such services in busy areas of campus increase college students' help-seeking behaviors (Ashburn, Lipka, & Hoover, 2007). Candlelight vigils and other events that bring the college community together assist in the coping and healing process of a traumatic event too (Ashburn, Lipka, & Hoover, 2007).

Although it is known that resources provide beneficial support to students suffering from the mental health consequences of trauma, which resources work best for students are not. More research is needed to examine which resources students prefer and which are the most helpful when universities and colleges respond to their needs after a traumatic event. This additional research can provide vital information that can assist in the establishment of guidelines or "best practices" for colleges and universities to use in the future. Such guidelines ensure that college and universities are responding adequately and appropriately to their students' needs which can possibly decrease the short and long-term psychological damage that trauma causes.

The Current Study

This study had three overarching objectives. The first objective of this study was to investigate the extent to which the Las Vegas shooting impacted the psychological well-being of the students at the University of Nevada, Reno (UNR), both in the days immediately following the incident and a few months later, as described retroactively by students themselves. Although located more than 450 miles from Las Vegas, the UNR community was affected directly and indirectly by the shooting. According to media reports at the time, at least five UNR students were present at the concert when the shooting occurred, and at least one UNR student was shot (Gray, 2017). Additionally, in

2017, approximately one-fifth of UNR's student body was from the Las Vegas area, illustrating the indirect impact the shooting had on UNR students due to their personal connection to the location of the attack (Gray, 2017). Many UNR students experienced psychological distress in the aftermath of the shooting, which was evidenced by the increased need for counseling services at the university as many students reported feeling shock, confusion and grief, all typical of responses an individual has when trauma occurs (Gray, 2017).

The second objective of this study was to survey whether UNR students, including those who are and are not from Las Vegas, were aware of the resources and events offered to them by the university community in the days following the shooting, whether they utilized or participated in these resources and/or events, and if so, whether they found such resources helpful. Resources that were offered on campus included but were not limited to: the counseling center's free drop-in counseling, the counseling center's grief consultations and support groups, the ASUN (Associated Students' Union of Nevada) sponsored candlelight vigil, blood drives for the victims, Take-5 Paws for Love (therapy dogs), and various fundraisers (bake sales, t-shirt sales, and donation tables) sponsored by campus organizations for victims of the tragedy. All of the counseling center's resources were available the week of the shooting (October 2, 2017-October 6, 2017) during their operating hours which are 8 a.m.-8 p.m. Monday to Thursday and 8 a.m.-5 p.m. on Fridays (UNR, 2017). Fundraisers were present on campus the week of the shooting as well at many different locations throughout campus, such as the library, the student union, and an outdoor plaza popular for student gatherings. The candlelight vigil was held on October 3, 2017 at 7 p.m. at a plaza located

in the center of UNR's campus. Blood drives occurred on October 9, 2017 and October 23, 2017. All blood collected at these two drives were specifically for the victims of the shooting (UNR, 2017). Lastly, Take-5 Paws for Love was present October 3, 2017-October 5, 2017 at the university's library (UNR, 2017).

Finally, the third objective was to survey whether students a) believed the campus community's response adequately and appropriately met the needs of the UNR student body, and b) desired other supportive measures other than the ones offered, and if so, what they thought they needed and why. This kind of inquiry has not been directly addressed in the literature concerned with traumatic outreach on college campuses to date.

The results yielded from this study will contribute to the mental health community and administration of college campuses. Only a small amount of research exists that addresses how universities should respond to traumatic events that impact their communities. The resourcefulness and usefulness of supportive measures offered are also not completely addressed in current literature relating to traumatic events and university communities' responses to those events. This study and its results can help inform how universities and college students can better cope with traumatic events in the future.

CHAPTER TWO

LITERATURE REVIEW

The Diagnostic and Statistical Manual V (DSM-V, a tool used by professionals to evaluate an individual's mental health and screen for mental health disorders, defines a "traumatic event" as "exposure to actual or threatened death, serious injury, or sexual violence" (American Psychiatric Association, 2013, p. 271). According to the DSM-V definition, examples of traumatic events include natural disasters, such as volcanoes, earthquakes, hurricanes and tsunamis; sexual assault; terrorist attacks; bombings; car accidents; war and combat; and mass shootings. Experiencing trauma can impact an individual for the long-term. Trauma victims can experience consequential psychological distress as much as five years after their trauma exposure (Winje, 1996), and depression, anxiety, and PTSD have been found in trauma victims as much as 17 years after initial exposure (Dai, et. al., 2017).

Trauma can have indirect consequences on its victims, in addition to the direct psychological consequences. The quality and satisfaction with life tend to remain poor after trauma has been experienced in survivors (Dai, et. al., 2017). One study found that those that suffer from severe symptoms of PTSD are more likely to experience job loss and financial struggles (Yu, et. al., 2016). Substance abuse is another probable long-term consequence of trauma exposure as survivors attempt to use substances to escape the reality of the trauma (Lowe & Galea, 2017). Intimate and personal relationship satisfaction is diminished in trauma victims too (Lambert, et. al., 2012). Exposure to trauma is detrimental to an individual's self and life as supported by the direct and indirect consequences of it. The number of individuals who have the possibility of

experiencing such consequences increases as trauma exposure becomes more common in society.

In 2009, it was reported that 80% of United States citizens experienced one or more traumatic event in their lifetime (Breslau, 2009). The DSM-V characterizes traumatic events into categories. These categories are natural disasters, accidents, combat, sexual/physical assault, witnessing sexual/physical assault, witnessing of a dead body, a threat or serious injury to a friend or family member, and secondary exposure to trauma through work or other means (American Psychiatric Association, 2013). Large-scale violent acts, such as acts of terrorism (including the acts that occurred on 9/11 and mass shootings) are less common than accidents, combat, sexual/physical assault and the other traumatic events mentioned previously. Therefore, opportunities to study their effects on those exposed to them are limited. Although large-scale traumatic events occurrences are infrequent in comparison to other traumatic events, they have been increasing in the U.S. over the past few years. This highlights the need for more research on how to respond to them and how those involved are impacted by them.

Mass shootings specifically occur more frequently in the U.S. and pertain to this current study. A mass shooting can be defined as, “an incident in which four or more people are shot and/or killed by a gun” (Klaus, 2017). From January 1, 2017 to October 1, 2017, 273 mass shootings have been reported in the United States (Klaus, 2017). Although the United States only makes up about 5% of the world’s population, 31% of all mass shootings occur on American soil (Klaus, 2017). Consequently, this illustrates that mass shootings are more common in the U.S. than in other countries. In addition, mass shootings in the United States are occurring more frequently than in the past. In

2014, the FBI reported that, “the average number of mass shootings per year for the years 2007-2013 was more than double the average for the years 2000-2006” (Klaus, 2017). Some of the deadliest mass shootings to occur in the United States in the past eleven years took place on Virginia Tech’s campus; in Sandy Hook, an elementary school in Connecticut; and now in Las Vegas at the Route 91 Harvest Festival. Despite the prevalence of such traumatic events, few studies examined the psychological impact of those exposed to the trauma and the effect of community resources offered to those impacted by the trauma afterwards.

This literature review focuses on mass shootings specifically and begins with an overview of the psychological consequences associated with trauma to build the framework for the premise of this study as this study investigates how students’ psychological well-being was impacted based on typical psychological responses to mass shootings. Then, I move into a consideration of common resources and coping mechanisms used for those exposed to a traumatic event since this study aims to investigate how useful students found their university’s responses to a mass shooting that impacted their community. Turning to how colleges have responded in the past to traumatic events provides background and supplies a comparison group for this study. Finally, I conclude the literature review by evaluating how useful past college’s responses were to a traumatic event as that is one of the goals of this study.

Psychological Consequences of Mass Shootings

Major depression, generalized anxiety disorder, alcohol-related conditions, panic disorder and post-traumatic stress disorder are common mental health consequences among those exposed to a mass shooting (Lowe & Galea, 2017). Symptoms of these

conditions include but are not limited to: decreased interest in once enjoyable activities, increased use of substances, isolation, withdrawal from relationships, and overwhelming feelings in new situations (American Psychiatric Association, 2013). Such symptoms and others of trauma-related disorders have been shown to increase in a population that was exposed to the trauma of a mass shooting within thirty days of the event when being compared to the population before the event or similar population that was never exposed to such trauma (Shultz, et. al., 2014). However, “it is not clear whether exposure to a mass shooting increases mental health problems for the long term” in a population exposed to the traumatic event (Shultz, et. al., 2014, p. 9). Symptoms of trauma tend to decrease in the majority of those exposed within nine months to a year after a mass shooting occurred (Shultz, et. al., 2014).

Post-traumatic stress disorder (PTSD) is the most common mental health consequence to experiencing a traumatic event (Lowe & Galea, 2017). Some criterion to be diagnosed with PTSD, according to the DSM-V are, but are not limited to nightmares, flashbacks, unwanted upsetting memories, trauma-related thoughts or feelings, isolation, inability to recall key features of the trauma, irritability, difficulty concentrating, difficulty sleeping, and hypervigilance (American Psychiatric Association, 2013). The DSM-V also specifies that symptoms of PTSD must persist for one month or longer for diagnostic purposes; any lesser time is considered Acute Stress Syndrome (American Psychiatric Association, 2013). In addition, the DSM-V states that for a person to be diagnosed with PTSD, s/he must have either been “directly exposed to trauma, witnessed trauma, learned that relative or close friend was exposed to trauma, and/or been indirectly exposed to trauma” (American Psychiatric Association, 2013, p. 271). One study found

that 92% of the 16,488 rescue, recovery and clean-up workers who responded to the attacks had symptoms of Post-Traumatic Stress Disorder (PTSD), a mental health disorder that results from exposure to a traumatic event (Maslow, et. al., 2015).

Indirect Exposure to Trauma

Indirect exposure to trauma is important to discuss for this study as most UNR students were indirectly exposed to the trauma of the Las Vegas shooting due to the distance between Las Vegas and Reno. According to Lowe & Galea (2017), indirect trauma exposure can result in a presentation of PTSD symptoms. However, they note that directly witnessing, being in closer proximity to the trauma, and having longer exposure to a stressor have been linked to greater Post-Traumatic Stress Symptoms (PTSS) (Lowe & Galea, 2017). Therefore, proximity to a mass shooting determines the psychological response a victim will have to the trauma. According to Lowe & Galea (2017), a direct victim is going to have a different experience than an indirect victim as their psychological well-being will be impacted differently due to the type (direct or indirect) and severity of the exposure (2017). Nonetheless, it is imperative that appropriate resources are provided as soon as possible after a shooting to minimize psychological distress regardless of the proximity to the tragedy (Lowe & Galea, 2017).

To better imagine the difference between direct and indirect exposure to a traumatic event, it is appropriate to turn to Laub's (1992) distinction among three levels of witnessing. Laub's first level of witnessing is labeled "being a witness to oneself" (Laub, 1992, p. 75). This level is characterized by experiencing trauma directly. Individuals that belong to this level have experienced a traumatic event themselves. Flashbacks and vivid memories occur to those who are a "witness to oneself" (Laub,

1992, p. 75). Laub describes memories of these individuals as “not part of the mainstream of [their] conscious [lives]”, as even the most minute details relating to the trauma are recalled and relived even as time passes (Laub, 1992, p. 76,). These flashbacks and memories that Laub describes are symptoms of PTSD as discussed earlier (American Psychiatric Association, 2013). This first level of witnessing can be related to this study as those that were at the festival the shooting occurred at belong in this level as they witnessed trauma first hand.

Laub’s second level of witnessing regards experiencing trauma through the accounts of others that experienced it themselves. Laub asserts that when one shares their testimony of a traumatic event, they are allowing others to relive and re-experience the event with them (Laub, 1992). Individuals who are associated with this level of witnessing are often counselors or interviewers. However, this level could be extended to friends and family members of victims of trauma as they are sometimes the ones victims confide in and share their experience with (Laub, 1992). Those that knew someone in attendance at the music festival when the shooting occurred can be associated with this level of witnessing as they hear about the event through an account of someone close to them that experienced it themselves.

Lastly, Laub’s third level is “one in which the process of witnessing is itself being witnessed” (Laub, p. 76, 1992). This level refers to witnessing trauma by being exposed to details of a traumatic event. For example, exposure to a testimony of a trauma victim through media is an example of witnessing at this level. This level is different from the second level because witnessing at this level does not occur with a direct interaction with a victim. Sometimes the victim is also a stranger to the witness making this level the most

indirect (Laub, 1992). Those who had some kind of connection to Las Vegas can be associated with this level as they are familiar with to the place where the mass shooting occurred. Although they did not attend the festival or know anyone there, these individuals witnessed the trauma through witnessing others experiencing trauma in a place they have a connection to. Drawing on Laub's description of this level, minute details of the shooting could cause individuals in this level to feel traumatized to some extent due to their bond, weak or strong, to the location in which the traumatic event occurred.

Coping & Resources

After a person has experienced trauma, the individual eventually needs to come to terms with the event. Various methods of coping have been instituted by researchers and practitioners. Coping can be defined as, "the cognitive and behavioral efforts made to master, tolerate, or reduce external and internal demands and conflicts among them" (Folkman, & Lazarus, 1980, p. 223) Individuals cope with traumatic events differently (Palus, Fang, & Prawitz, 2012). The amount of time a person copes with the consequences of a traumatic event varies as well (Palus, Fang, & Prawitz, 2012).

There are different styles of coping. The first style of coping can be labeled problem or task-focused coping. When individuals use this method of coping, they actively seek out ways to find a solution to the problem or change the situation for the better (Endler & Parker, 1993). Another style of coping is emotion-focused coping. With this way of coping, individuals use their feelings to interpret the trauma. Blame, anger, aggression, and sadness are all feelings an individual might experience if they cope with the trauma in an emotional way (Endler & Parker, 1993). Lastly, there is avoidance

coping. Avoidance coping is when a trauma victim does everything in his/her power to refrain from any conversation, location, object or person that may be associated with the traumatic event they experienced (Endler & Parker, 1993). Many individuals who partake in avoidance coping tend to perform other activities to distract them from their thoughts and feelings relating to trauma.

In a study that investigated the coping strategies used by youth in response to a terrorist attack in Norway, Jensen, Thoresen, and Dyb (2015) found that problem-solving strategies and seeking understanding of the situation that occurred were the most used coping strategies in response to the traumatic event. A problem-solving strategy is used anytime an individual takes the initiative to do something that makes a bad situation better. Seeking help and doing something for enjoyment to relieve the pain of trauma are examples of problem-solving behaviors (Jensen, Thoresen, and Dyb, 2015). In addition, when a person attempts to seek understanding of a situation, the individual tends to ask and think a lot about why something occurred (Jensen Thoresen, and Dyb, 2015). The same study found that turning to religion for healing purposes and avoiding emotions and daily activities were the least used coping strategies (Jensen, Thoresen, & Dyb, 2015). Other useful coping strategies detailed included seeking professional support and remaining positive and hopeful about the situation (Jensen, Thoresen, & Dyb, 2015).

Besides the internal coping strategies mentioned above, external resources are also offered in a response to a mass shooting (Shultz, et. al., 2014). Following a mass shooting, mental health resources are typically offered to the victims and witnesses of the event (Shultz, et. al., 2014). Mental health professionals are often made available to those who need it, and screening for mental health disorders usually takes place as well (Shultz,

et.al., 2014). Communities that were affected by the traumatic event also offer support by coming together to rebuild their shattered sense of unity (Shultz, et. al., 2014). Social solidarity has even been shown to lower depression and PTSD symptoms after a traumatic event has occurred (Shultz, et. al., 2014).

A study conducted in China after an earthquake destroyed the community discovered the importance of resources and support in those who survived the natural disaster (Huang, Tan, & Liu, 2016). Social support (i.e. positive relationships, comfort from close ones, etc.) and a sense of community were negatively correlated with depression. Furthermore, the trauma survivors that experienced social support and sense of community was less likely to develop depression as a psychological consequence of the earthquake. In addition, survivors who received support from the government (physical, public, and financial), and felt a sense of community resulted in a higher level of life satisfaction than those who did report experiencing these measures (Huang, Tan, & Liu, 2016).

Universities/Colleges Response to Traumatic Events

In the year following the Virginia Tech shooting, Hughes and colleagues (2011) investigated the impact of the shooting on students at Virginia Tech. A survey was given to 4,639 students, which investigated their feelings and psychological well-being following the shooting. Results from this study found that, “high levels of posttraumatic stress symptoms (probable PTSD) were experienced by 15.4% of respondents 3 to 4 months following the shooting” (Hughes, et. al., 2011, p. 403). The results of the study support the claim that college students experience post-traumatic stress even months after the traumatic event occurred.

Three years following the Virginia Tech shooting, another mass shooting occurred in Connecticut at Sandy Hook Elementary School. Adam Lanza, the gunman, killed twenty students and six staff members of the school (Rosenberg, 2014). This shooting highlighted the importance of schools' responses to crisis. Cowan and Rossen (2013) detail how crucial an effective response to a school shooting is when ensuring that recovery occurs for all those involved. The researchers state that the Sandy Hook shooting, "drew new and meaningful attention to the important role of school-based mental health professionals in student wellness, school safety, and crisis recovery" (Cowan & Rossen, 2013, p. 9). Mental health resources and support at schools should be available to any individual who seeks it after a traumatic event occurs that may have impacted their community. Finally, Cowan & Rossen (2013) make a salient point that, "a school's capacity to respond to a crisis almost always reflects the safety, crisis, and mental health resources that were in place before the crisis" (p. 12). This underscores the importance of having mental health resources, crisis management and preparedness, and community support already in place at schools before a traumatic event may occur. Therefore, schools should always have mental health support and resources available as it will only make them more prepared if a crisis does occur and ensure their response to a crisis is as effective and appropriate as possible.

Tragedies like the Virginia Tech Shooting and the 9/11 bombings have brought attention to the mental health crisis on college campuses (Schwartz & Kay, 2009), and with all the different coping strategies and resources offered in response to mass shootings, universities and colleges are faced with the obstacle of how they should respond to a mass shooting and/or a traumatic event that had an impact on their campus.

However, very little literature exists that addresses the impact traumatic events have on college students. Lowe and Galea (2017), found that only 49 studies have been published that address the immediate, short term, and long-term impacts of such traumatic events on the psychological well-being of individuals from affected communities since 1984, and of those only 13 focused on college students. This scarcity of research relating to the impact traumatic events have on college students' psychological well-being makes it difficult for universities and colleges to create an appropriate plan to respond to such tragedies that impact their community. In addition, no gold standard of protocol currently exists for responses to tragedies on college campuses, thus many university administrators feel pressure to ensure they do not over or under react (Schwartz & Kay, 2009).

In their discussion of supports offered to students attending universities in the state of Virginia immediately following the Virginia Tech shooting in 2007, Ashburn, Lipka, and Hoover (2007) provide anecdotal evidence for the importance of counseling services for individuals directly affected or present at the time of the shooting. Counseling services and advertisement for such services in high traffic areas of campus proved to increase the number of students reaching out to seek the help that they needed. Even more, "the visibility of mental health services" can help immensely for students that are suffering from mental health consequences from a traumatic event, even if they do not take advantage or participate in a resource or event designed to help cope with the trauma (Ashburn, Lipka, & Hoover, 2007, p. A14-A15).

Unifying events such as candlelight vigils at universities may be more effective on campuses where the effects on the student body were less direct (Ashburn, Lipka, &

Hoover, 2007). However, research is needed to determine whether affected students agree with researchers' observations, whether counseling is always the most helpful response, and whether students who need counseling receive it. Increasing the understanding of how mass shootings and other traumatic events affect college students' psychological well-being and how various supports help them to heal is important for informing how universities should respond to such events immediately after they occur, and in the months, that follow to minimize students' psychological distress.

Usefulness and Utility of University/College Responses

There is no study that I am aware of that addresses the usefulness and utility of resources offered in response to a mass shooting in the United States, which highlights the need for more research in this area. However, one study investigated the usefulness of resources offered to students after a high school shooting in Kauhajoki, Finland (Turunen, et. al., 2014). A 22-year-old student shot and killed ten people at Seinäjoki University of Applied Sciences (Turunen, et. al., 2014). Four months after the shooting occurred, 236 students took a survey that investigated the severity of their exposure to the shooting and the student's decision to utilize resources offered and their usefulness. The same students were administered the same survey again sixteen months and twenty-eight months after the shooting to evaluate if the usefulness of the resources they utilized changed over time. Results of this study showed that students found social support from their peers and family members most useful (Turunen, et. al., 2014). Twenty-five percent of the students rated mental health support from professionals (i.e. counselors and psychologists) more helpful within four months after the shooting than any other time (Turunen, et. al., 2014). The usefulness of the continuation of support from their mental

health community was illustrated by the students' responses to the survey sixteen to twenty-eight months following the shooting. Students reported that they continued to seek help from mental health professionals as such help increased their sense of safety even months after the mass shooting occurred (Turunen, et. al., 2014). Students also reported that the continued use of therapy and medications to help combat their psychological consequences of the shooting was still helpful a year after the event (Turunen, et. al., 2014). Finally, researchers found that most useful resources throughout the time span of the survey were the creation of a "therapeutic alliance" with students and mental health professionals and offering practical assistance to students who needed it (Turunen, et. al., 2014)

Summary

Large-scale traumatic events are on the rise in the United States, especially mass shootings (Klaus, 2017). Those individuals who experience these events are very likely to suffer from trauma and receive a diagnosis of PTSD (Lowe & Galea, 2017). Trauma can have direct, indirect, and/or long-term consequences on an individual, which stresses the importance of receiving proper treatment, support, and resources that assist with coping as soon and as fast as possible (Lowe & Galea, 2017).

Individuals all cope differently when a traumatic event impacts their psychological well-being (Palus, Fang, & Prawitz, 2012). There are three different coping styles that are the most common and useful to those suffering from trauma. These styles are: problem or task-focused, emotion-focused, and avoidant (Endler & Parker, 1993). Besides coping, receiving support from the community, friends & family, professionals and the government have been shown to be helpful to those who experienced trauma

(Huang, Tan, & Liu, 2016). External resources, such as counseling, support groups, and events that unify the community, are useful to trauma survivors as well (Shultz, et. al., 2014).

Very little literature exists on how colleges respond to traumatic events, specifically mass shootings. This is alarming as college students are at higher risk for psychological distress due to stress from their new-found independence and from navigating their way through this important stage in their lives (Watkins, Hunt, & Eisenberg, 2012). Research that does exist regarding college/university responses to traumatic events have found that offering counseling services to students that are suffering from trauma have been vital in their healing process (Ashburn, Lipka, & Hoover, 2007). Events, like candlelight vigils, that unify the community in which the traumatic event took place in have also been successful in helping those impacted by trauma heal (Ashburn, Lipka, & Hoover, 2007). However, more research is needed to determine the utilization and usefulness of such resources and supports, which is what this current study investigates.

CHAPTER THREE

METHOD

Participants

A total of 165 UNR students participated in this study (n=165). There were 124 female participants (75.2%), 35 male participants (21.2%), 2 non-binary/transgender participants (1.2%), and 4 participants that preferred not to provide their gender (2.4%). As for age group, the most prominent age group among the participants was 20-22, having 72 participants (43.6%) fall in that category. There were 66 participants (40%) in the 18-20-year-old age group, 14 (8.5%) participants in the 23-25-year old age group, 3 (1.8%) in the 26-28-year old age group, 1 (.6%) in the 28-30-year old age group, and 8 (4.8%) participants were above the age of 30. One participant (.6%) did not provide their age group. The race/ethnicity of participants is provided in Table 1.

	<i>n</i>	(%)
White or Caucasian	110	66.7
Latino or Hispanic American	26	15.8
Black, Afro-Caribbean, or African American	4	2.4
East-Asian or Asian American	11	6.7
Middle Eastern or Arab American	2	1.2
South Asian or Indian American	3	1.8
Native Hawaiian or Other Pacific Islander	1	.6
American Indian or Alaska Native	1	.6
Interracial	5	3
No response	2	1.2
Total	165	100

Table 2 illustrates the college representation of the sample. The living arrangement of participants are as follows: 41 (24.8%) participants live in a residence hall, 80 (48.5%) participants live off-campus in a house or apartment with roommates, 39 (23.6%) participants live at home with their parents or family, 4 (2.4%) participants live in a fraternity or sorority house, and 1 (.6%) participant did not provide their living arrangement.

Table 2.

College Representation of Participants

	<i>n</i>	(%)
College of Liberal Arts	62	37.58
College of Education	36	21.82
Division of Health Sciences	17	10.3
College of Business	25	15.15
College of Science	12	7.27
College of Agriculture, Biotechnology and Natural Resources	3	1.82
The Reynolds School of Journalism	7	4.24
College of Engineering	0	0
Graduate School	1	.61
No response	2	1.21
Total	165	100

Out of the 165 participants, four (2.42%) of them attended the festival in Las Vegas where the shooting took place. All four of these participants were at the festival at the time of the shooting. However, none of them were injured. There were 120 participants (72.72%) that knew someone, whether it be a family member, friend or acquaintance, that was at the festival. In addition, 32 (19.39%) participants had some form of connection to the Las Vegas area, but no connection to the festival. These participants either are from, visited, or lived in Las Vegas at some time in their life or know someone (i.e. family, friends, acquaintance) who is associated with the Las Vegas

area. Lastly, nine (5.45%) participants had no connection to the festival and no connection to the Las Vegas area.

Participants were recruited by UNR's Social Psychology SONA system. SONA is a resource for the social and behavioral sciences that allows researchers to advertise their studies, and for students to view and participate in research projects occurring on campus. SONA participation is required in many undergraduate and graduate courses across campus, thus the use of SONA was a good way to get a representative sample of campus students. Research has shown that student participation rates increase when there is a possibility of an incentive (Laguilles, Williams, & Saunders, 2011). Upon completion, participants had the option to be entered in a drawing to win one of five \$20 Starbucks gift cards. Participants who entered the drawing for a gift card were provided a link to a separate form, where they submitted their email addresses for the sole purpose of the drawing. The link to a separate form ensured the confidentiality and anonymity of participants and their responses. To participate in this study, participants had to meet three requirements. First, participants must have been eighteen years of age or older at the time of taking the survey. Second, participants must be a graduate or undergraduate student at UNR. Lastly, participants must have been enrolled in at least one course in the Fall of 2017 and the Spring of 2018. These eligibility requirements ensured that participants were students of UNR, and therefore, they had access and were present during the time that UNR offered resources in response to the Las Vegas shooting. It also ensured participants were students at the time the survey was administered.

Measures

The data for this study was collected via survey given to participants. The survey

consisted of four different measures: (1) the proximity of the participant to the event, (2) the impact the shooting had on the participant's psychological well-being, (3) the participant's awareness, participation, and rating of usefulness of resources offered by UNR in response to the Las Vegas shooting, and (4) demographic information about the participant. Although sample questions are given below, all survey questions are provided in Appendix A.

1. Proximity to event. The survey contained sixteen questions (question numbers 1-16) that assessed each participant's physical or psychological proximity to the Las Vegas shooting (e.g., were they present? Did they know anyone present? Are they from Las Vegas? Do they have any connection to the Las Vegas area?). It was important to include this set of questions in the survey as the relationship and association a participant may have had to the shooting could have been related to the degree in which their psychological well-being was impacted. Their personal proximity to the event could have also affected their decision to participate in the resources offered to them by UNR in response to the shooting. All questions pertaining to this measure were closed-ended. Responses were scored as follows: 1= yes and 0= no.

For use on the analyses, participants were categorized into four groups based on their responses to the proximity questions. The first group labeled "Direct Relation to Festival (DRF)" consisted of those who attended the music festival the shooting occurred at. All participants in this group (n=4 or 2.42%) were at the festival when the shooting began, and therefore, they physically and psychologically experienced the event directly. The second group was called "Indirect Relation to Festival (IRF)". It consisted of those (n=120 or 72.72%) who knew someone was at the event when the shooting happened.

Participants could have known a family member, friend or acquaintance that attended the festival that or was not hurt. The participants in this group have a psychological, indirect relationship to the event. Participants belonging to the third group named “Direct and Indirect Relation to Las Vegas (DIRLV)” had some connection to Las Vegas, but no connection to the festival. These participants (n= 32 or 19.39%) have been from Las Vegas, lived or visited in Las Vegas at some point in their life, or have friend, family, or acquaintances from the Las Vegas area. This third group of participants have a physical and/or psychological direct or indirect connection to Las Vegas. Lastly, participants categorized in the fourth group labeled “No Relation to Festival and Las Vegas (NRFLV)” have no connection to the event at which the shooting occurred at and to the Las Vegas area. These participants (n=9 or 5.45%) did not attend the event or know anyone that attended the event. They also have never lived or visited Las Vegas or know anyone that is from or lives in that area currently.

2. Impact of Events Scale. The Impact of Event Scale-Revised (IES-R; Weiss, 2007) was administered twice in the survey (questions numbers 17-60): once in relation to how they remembered feeling the week immediately following the incident, and once in relation to how they felt at the time they completed the survey (three to five months after the shooting occurred). The IES-R was selected for use in this study because it is the most recent scale located when researching that measures the psychological trauma of an individual resulting from a traumatic event. Specifically, it identifies Post-Traumatic Stress Disorder symptoms with its ratings and determines whether PTSD is of concern for an individual (Weiss, 2007). Statements found on the IES-R evaluate how much a traumatic event has caused stress and/or disrupted an individual’s daily lifestyle (e.g. “I

had trouble staying asleep”, “I felt irritable and angry.” “I had dreams about it”) (Weiss, 2007, p. 22). The survey in this study asked participants to read a list of the twenty-two statements found on the IES-R and rate how frequent they experienced each statement. Responses were scored using the following: 1= Not at all, 2= A little bit, 3= Moderately, 4= Quite a bit, and 5= Extremely. Each participant received an IES-R score based on their responses to the statements.

Individual responses were summed to obtain the IES-R score. Scores ranging from 24-32 indicate risk for PTSD (Weiss, 2007). Scores that range from 33-36 indicate a probable PTSD diagnoses, and scores 37 or higher indicate serious concern for PTSD as daily bodily functions are being impacted due to the trauma, regardless of the time that has passed since the trauma occurred (Weiss, 2007). The IES-R also contains sub-scores based on three groups of symptoms for PTSD. These sub-score groups are: Intrusion, Avoidance, and Hyperarousal (Weiss, 2007). The IES-R and survey administered in this study is provided in Appendices and can be referred to determine which questions belong to each sub-group. For this study and for the purpose of data analysis, sub-groups were only used to impute scores for missing data. For items left blank by respondents, the average score was found by adding the scores of the questions in the corresponding sub-group to which the blank question belongs to and then dividing it by the total number of questions belonging in the sub-group. That score was then used to calculate the total IES-R score of the participant.

3. Awareness, participation, and usefulness of campus resources. Participants were asked to identify which events, activities, and resources that occurred on the UNR campus in response to the shooting that they were aware of, which they had participated

in, if any, and then to report whether or not they felt each was helpful (question numbers 61-70). The resources the survey addressed were: the counseling center's free drop-in counseling, the counseling center's grief consultations and support groups, the ASUN (Associated Students' Union of Nevada) sponsored candlelight vigil, blood drives for the victims, Take-5 Paws for Love (therapy dogs), and various fundraisers (bake sales, t-shirt sales, and donation tables) sponsored by campus organizations for victims of the tragedy. Participants also had an option of "other", where they could have written in a resource they used or were aware of that was not mentioned in the survey. Participants were asked if they continued to utilize any of the resources at the time they took the survey (months after the shooting). Participants were then asked to provide open-ended responses to two questions. One asked about what support (i.e. family, friends, counseling, etc.) they found most helpful, and the other asked about what resource (i.e. blood drives, fundraisers, the vigil, etc.) they found most helpful. They were also asked to report on their professors' in-class responses to or acknowledgment of the shooting. The final part of this section of the survey had participants respond to two-open ended questions about their perceptions of the adequacy and appropriateness of the UNR community's response, and suggestions they may have had to better meet students' needs following a tragic event.

Demographics. Participants were asked to provide demographic information by answering the last six questions of the survey (question numbers 71-76). The demographic questions provided in this survey asked about the participant's class standing, race/ethnicity, age group, gender identity, current living situation, and the college or school they belonged to according to their major area of study.

Procedures

Institutional Review Board (IRB) approval was granted before the survey was released for data collection. After approval was granted in January of 2018, the survey was administered online from the beginning of February 2018 to the middle of April 2018 through Survey Monkey, a program designed for the creation and data collection of surveys. The survey was posted on SONA and available via weblink for those who wanted to participate but did not need SONA credits. Participation in this survey was voluntary. Therefore, participants had the right to withhold answering any question in the survey they did not wish to answer for any reason. Participants also had the right to withdraw their consent to this study at any time by choosing to stop taking the survey, regardless of the progress they may have made. Participants who did not answer questions or did not complete the survey were not penalized in any way.

The survey consisted of seventy-six possible questions, dependent on the participant's responses. The survey began with a description of a mass shooting that recently occurred in Las Vegas, NV. After reading the description of the event, the participant continued the survey which presented questions that investigated the four measures discussed above. The survey questions can be found in Appendix A categorized into the respective measures they aimed to investigate.

Once data was collected from the survey, it was organized in tables and figures to better illustrate and visualize the results. SPSS was used to compute descriptive statistics for all quantitative variables and correlations between categorical variables (e.g., proximity to the event, participation in resources) and the IES-R scores immediately and greater than 2 months from incident. The open-ended responses were analyzed using

thematic analysis (Boyatzis, 1998)

CHAPTER FOUR

RESULTS

Research Objective 1

The first objective of my study was to investigate how the Las Vegas shooting impacted the psychological well-being of the students who attend the University of Nevada, Reno (UNR), both in the days immediately following the incident and a few months later, as described retroactively by students themselves. Mean scores of the IES-R were calculated both for immediately following the shooting and currently (at the time the survey was taken by the participant) for each of the four proximity groups. Figure 1 illustrates the means of the groups. The DRF (Direct Relation to Festival) group had the highest mean IES-R score following the shooting, $M = 56.5$, $SD = 24.8$, and at the time the survey was administered, $M = 34.5$, $SD = 22.96$. The NRFLV (No Relation to Festival or Las Vegas) group had the lowest mean IES-R score following the shooting, $M = 16.11$, $SD = 12.77$, and at the time the participants took the survey, months later, $M = 6$, $SD = 8$. The mean IES-R scores of the other two groups are as follows: IRF (Indirect Relation to Festival) immediately after shooting $M = 26.13$, $SD = 15.93$, IRF at the time of the survey, $M = 10.03$, $SD = 11.40$, DIRLV (Direct and/or Indirect Relation to Las Vegas) immediately after shooting, $M = 18.09$, $SD = 12.3$, and DIRLV at the time of survey $M = 7.38$, $SD = 7.61$.

The DRF and IRF mean IES-R scores following the shooting met the criteria for probable diagnosis of PTSD according to the IES-R key. The only group that had a mean IES-R score high enough to have a probable PTSD diagnosis at the time the survey was administered was the DRF group. The DIRLV group and NRFLV group mean scores did

not illustrate any concern for PTSD the week following the shooting and at the time the survey was administered.

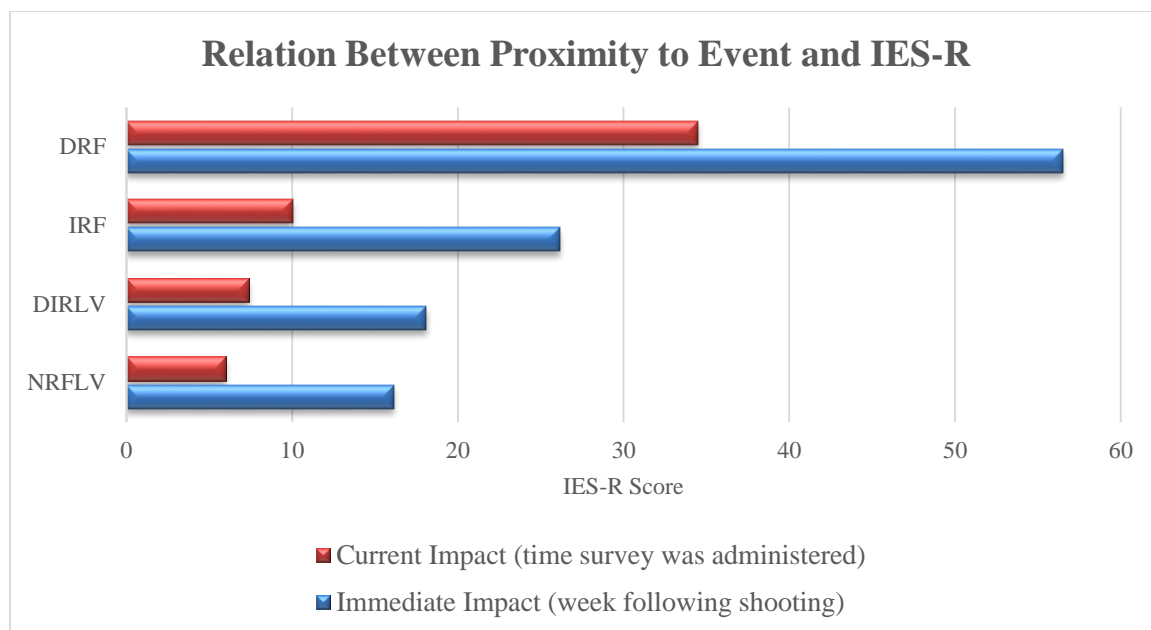


Figure 1. Relation Between Proximity to Event and IES-R

Research Objective 2

The second objective of this study was to survey whether UNR students were aware of the resources and events offered to them by the university community in the days following the shooting, and if they utilized them. The percentage of students who were aware of and/or used each resource in the weeks immediately following the shooting are reported in Table 3. Of the students that used each resource, they all rated them to be helpful when coping with the trauma of the Las Vegas shooting to some extent. However, the candlelight vigil and therapy dogs were rated “extremely helpful” more frequently than other resources. Participation in the blood drive also seemed to be “very helpful” to participants.

Table 3.

Awareness and Use of UNR Resources Immediately Following the LV Shooting

	Aware		Used	
	<i>n</i>	(%)	<i>n</i>	(%)
Counseling drop-in hours	116	70.3	4	2.43
Grief consultations	52	31.51	0	0
Counseling support groups	84	50.9	0	0
Candlelight vigil	126	76.36	38	23.03
Blood drives	116	70.3	20	12.12
Therapy dogs	83	50.3	30	18.18
Fundraisers	67	40.6	16	9.7
Counseling extended hours	58	35.15	2	1.21
Other (dormitory support group, friend support group, counselor appointment)	3	1.81	3	1.81
Total	211		113	

Participants were also asked to report what resource they used or participated in that was most helpful to them in comparison to others related to the shooting. *Table 4* depicts the results from the survey regarding the most helpful resource as reported by participants.

Table 4.

Most Helpful Resource to Participants

	<i>n</i>	(%)
Vigil	38	23.03
Counseling	17	10.3
Therapy Dogs	12	7.27
Friends/Family	12	7.27
Faculty/Staff	11	6.67
Blood Drives	9	5.45
Community Support	6	3.64
Fundraisers	3	1.82
Other (discussion about event, working out as distraction)	2	1.21
N/A/None/No Response	69	41.82
Total	179	

Note. The total number of responses is more than the sample as some participants described multiple resources as most helpful to them.

The survey also investigated the type of support participants turned during the week of the shooting to determine if UNR support was preferred over other supports (family & friends, community groups, etc.). *Table 5* illustrates how many students turned to friends & family, faculty & staff, counseling & support groups, other university groups, a community resource, or themselves to help cope with the psychological distress they experienced from the shooting.

Table 5.
Most Helpful Support to Participants

	<i>n</i>	(%)
Friends & Family	124	75.15
Faculty & Staff	6	3.64
Other University Groups	4	2.42
Counseling & Support Groups	3	1.82
Myself (the participant)	2	1.21
Other Community Resource	2	1.21
No response/NA/None	29	17.58
Total	170	

Note. The total number of responses is more than the sample as some participants described multiple supports as most helpful to them.

Professor's actions relating to the shooting were investigated in the survey. It was found that 137 (83.03%) participants' professors discussed the shooting in their classes, and 117 (70.9%) participants' professors discussed resources offered in response to the shooting. However, only 23 (13.94%) participants' professors cancelled class due to the shooting.

Research Objective 3

The third objective of this study was to survey whether students a) believed the campus community's response adequately and appropriately met the needs of the UNR student body, and b) whether they desired other supportive measures other than the ones offered, and if so, what they thought they needed and why. The majority of the participants (115 or 69.7%) believed that UNR responded adequately and appropriately to the students' needs after the Las Vegas shooting. However, 34 (20.6%) participants felt that the university could have done more, and 16 (9.7%) participants did not share their opinion on the matter. Since the question that investigated student's satisfaction with UNR's response was open-ended, *Table 6* provides representative responses of students who thought UNR responded appropriately and adequately, and students who did not.

Participants who were not satisfied with UNR response to the Las Vegas shooting detailed what additional supportive measures they desired that the university should have offered in order to have provided a better response. The cancellation of classes and/or excused absences the week following the shooting was a popular suggestion. Some students desired more in-class discussion pertaining to the shooting and resources being offered on campus. These students desired more support and guidance from the faculty of the university as well. More information about campus resources was desired by some students too. Other students that felt the response by UNR did not appropriately or adequately meet the students' needs after the shooting desired that resources be more available to them. By this they meant that UNR should have extended events such as blood drives and fundraisers beyond just the week or two after the shooting. Finally, one student suggested that the event should have caused an increase in education and

discussion about school shootings, trauma, and mental health. This student particularly desired guest speakers on campus that would allow students and faculty to freely discuss the issues relating to the Las Vegas shooting and the consequent state of students' mental health on campus.

Table 6.

Participants' Responses on if UNR Responded Adequately & Appropriately to Students' Needs

	Counts & Percentages of Responses	Representative Responses
Yes, UNR responded to the students' needs after the Las Vegas shooting adequately and appropriately.	115 (69.7%)	--"Yes, they immediately reached out to students via email and not only expressed empathy but provided resources." --"Yes, the resources available provided students with a sense of comfort as they were ensured they did not have to go through anything alone." --"Yes, I had one teacher especially who mentioned it and how he knew it would affect people and told us about all the places that we could get help and was just overall very supportive and helpful."
No, UNR did not respond to the students' needs after the Las Vegas shooting adequately and appropriately.	34 (20.6%)	--"I think those who were affected by this needed a couple days to cope with everything and I don't think UNR gave them that." --"No, I did not see any help given to those who I am close with from those who are administration or staff at the university." --"I believe their response was poor. Classes were still held, as if nothing had occurred and professors expected students to keep pressing forward. Professors should have at least made class optional for those who were willing to move forward, or they should have just canceled classes for a week."
No Response	16 (9.7%)	N/A

CHAPTER FIVE

DISCUSSION

Research Objective 1

The results pertaining to the first objective of this study show that proximity, both physical and psychological, to a traumatic event such as the Las Vegas shooting, has an impact on the degree to which an individual's psychological well-being is affected. Those who were at the festival when the shooting occurred (the DRF group) had the highest mean score of 56.5 for the IES-R, indicating physical proximity impacts psychological well-being the most. Those who had a connection to the festival (IRF) or Las Vegas (DIRLV) were impacted by the shooting as well according to their IES-R scores, which supports the claim that indirect trauma exposure can cause psychological distress. Those with no connection to the festival or Las Vegas (NRFLV group) had the lowest mean IES-R score of 16.11. These IES-R scores suggests that proximity matters; the more someone is connected to a traumatic event the more psychological distress they will experience. However, it is important to note that even those with no connection to the shooting or Las Vegas still experienced psychological distress to some degree the week following the shooting in comparison to the months after the shooting when the survey was administered. The mean IES-R scores of each group reveals that large-scale traumatic events, such as mass shootings, can impact an entire community to some extent regardless of each person's in the group associated proximity to the event. These results also relate back to Dori Laub's three levels of witnessing as all three levels are portrayed in this study (1992). Furthermore, all three levels experienced some psychological distress relating to the shooting, and the amount of psychological distress was related to

the level of witnessing participant's experienced (Laub, 1992).

Time influenced average IES-R scores. Every group's average score decreased over time. The DRF group's mean IES-R score decreased by 31.7, and the IRF group's mean IES-R score decreased by 16.1. The NRFLV group's mean IES-R score decreased by 10.11, and the DIRLV group's mean IES-R score decreased by 10.71. Each group had higher mean IES-R score the week of the shooting than at the time when the survey was administered, which was months after the shooting occurred. Time seems to play a role in the decrease of psychological distress relating to a traumatic event. During the time between the shooting and when the survey was administered, students might have utilized resources, used coping mechanisms, or sought professional help to assist in decreasing their consequent psychological distress from the shooting.

Research Objective 2

Pertaining to this study's second objective, at least one fourth of the participants were aware of each resource offered by UNR in response to the shooting (disregarding the "other" resources that were provided by individual participants themselves). Most participants (126 or 76.36%) were aware of the candlelight vigil held on campus, and this resource also was most utilized by participants. Blood drives were one of the second most resource participants were aware of, and they were the third most utilized. Counseling drop-in hours was the other second most resource participants were aware of, yet it was reported as one of the least utilized resources. Many participants were not aware of the therapy dogs on campus following the shooting. However, it was the second most used resource by participants. No participants reported using counseling support groups or grief consultations, and very few participants participated in fundraisers, counseling

extended hours, and the other resources listed by individual participants (dormitory support group, friend support group, and counseling appointment). Table 3 portrays these statistics.

The disconnect between awareness of utilization of resources could have occurred for many reasons. First, some of the resources were not readily available to participants. Participants commented on how they were too busy to participate in resources offered due to time conflicts with other commitments which could have played a role in why awareness of resources was so high in comparison to use of the resources offered. Another reason for the lack of use of resources on campus following the shooting could have been due to the idea that students did not think they needed to seek help to cope with the mental health consequences of the trauma they experienced related to the shooting. Although the mean IES-R scores of the groups say otherwise, students may have used their own coping mechanisms (like avoidant coping or emotion-focused coping) to manage their psychological distress rather than partaking in the use of campus resources and supports (Endler & Parker, 1993). A final reason for this gap between awareness of utilization could be due to the stigma around mental health and seeking help. Students may have not felt comfortable getting help or admitting they needed help which could have contributed to the low utilization rates.

Participants also wished for better advertisement of the resources. Participants reported that not enough information was given out about resources and events in response to the shooting which could have contributed to the low utilization rates as well. Therefore, announcements regarding resources and supports being offered by the university after a traumatic event may need to occur more frequently and through many

different means (i.e. announcement in classes, tabling on campus, emails, posters/flyers) to ensure all students are receiving the information.

Although all resources utilized by participants were rated helpful to some extent, the candlelight vigil was found to be the most helpful for participants when compared to the others. Counseling, therapy dogs, and support from friends and family were the other resources that were rated frequently as most helpful. Table 4 provides the exact number of participants who found each of these resources to be most helpful to them. The vigil being reported the most frequently as the most helpful resource supports Ashburn, Lipka, and Hoover's claim that events that unify the community, such as vigils, are more effective on campuses where the effects on the student body were less direct (2007).

Fundraisers, community support, and other resources (discussion about the event and working out as a distraction) were rated the least number of times as the most helpful resource which could be because these resources had some of the lowest utilization rates. Consequently, less participants had the opportunity to rate them most helpful as they did not have the chance to use them.

The most helpful support (which refers to a person or people the participant went to for support) to participants were investigated in the survey to determine if students preferred university support over other support. Survey results revealed that about three-fourths of participants rated that support from family and friends following the shooting was most helpful to them. Six or less participants rated other resources (i.e. faculty & staff, university groups, counseling & support groups) as most helpful.

Most participants' (137 or 83.03%) professors discussed the shooting before, during, and/or after class. 117 (70.9%) of participant's professors discussed the resources

that were being offered on campus. However, less than 15% of participants' professors cancelled class due to the shooting. Many participants commented on this as they wished more professors would have allowed them time to grieve or process the event by cancelling classes the week of the shooting or by excusing absences for those reasons.

Research Objective 3

Results relating to the third objective found that the majority of students, about 70%, believed the campus community's responses both adequately and appropriately met the needs of the UNR student body. The other 34 (20.6%) students who felt that UNR could have done more to respond to students' needs after the shooting desired cancellation of classes and/or excused absences following the week of the shooting. They believed more in-class discussion and support provided by faculty would have been beneficial. One recent study found that many UNR students view faculty and staff as a trusted form of support at times of distress (Peterson, 2017). This desire for faculty support suggests that universities could provide training for faculty and staff regarding how to appropriately respond to students distressed by a traumatic event. Therefore, universities and colleges could instruct all professors to discuss the event and consequent resources being offered to ensure all students are receiving the same information.

Participant's reported other desired supports. These supports were: more information about campus resources, the extension of supportive events (such as blood drives & fundraisers), and more opportunities for discussion and education about the event. Therefore, universities and colleges should incorporate these desired supports into their future responses to traumatic events that impact their community to ensure their students' needs are being adequately and appropriately addressed.

Limitations

This study was limited to 165 students of UNR who were primarily female (124 or 75.2%). Majority of the participants (62 or 37.57%) belonged to the College of Liberal Arts. The sample was not as large as it could have been, which resulted in a less diverse sample. Therefore, the results of this study cannot represent the entire student body population of UNR, let alone represent college students in general. More advertisement about this study and allowing the study to stay active for a longer period of time may have resulted in a larger, more diverse sample that could better represent UNR students and college students as a whole.

The data in this study can only apply to one university and one traumatic event. More data is needed to determine what would be the best and most useful response from universities and colleges after any traumatic event impacts their campus. Data of this nature could also provide a better representation of the college student population which can result in findings being more generalizable.

Future Research

More research on this topic can reveal if there are any relationships between proximity level and the type of resources used. Additionally, more research can determine if the additional resources and supports desired by students would actually be helpful and used if implemented. Faculty and staff's psychological well-being, proximity to the event, and resource/support use could also be investigated to determine if it had an impact on whether they discussed the topic and/or resources being offered by the university in their classes. Faculty and staff could also be surveyed about their decisions regarding cancelling classes and/or excusing absences after a traumatic event impacted

their community.

This study or a similar one could be conducted again, but at other colleges and universities. This would allow for more data to be collected about how other universities respond to traumatic events in their community. Results from such studies can be compared to design “best practice” guidelines for universities and colleges to use when a response to traumatic event, such as a mass shooting, is necessary.

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Appendix A

Survey

On October 1st, 2017, a lone gunman, opened fire on the Las Vegas strip at a 3-day country music festival. About 22,000 people of all ages from around the world, including Reno, NV, attended this festival. On the final evening of the event at approximately 10:08 p.m., the gunman began firing into the crowd from his hotel room. He fired for 10 to 15 minutes uninterrupted before pulling the trigger on himself, leaving at least 58 people dead and over 500 injured (Yan & Park, 2017).

1. Proximity to Event

1. Are you over the age of 18?
 - Yes → continue to question 2
 - No → end survey
2. Were you in attendance at the Route 91 Harvest Festival, any of the three days?
 - Yes → continue to question 3
 - No → skip to question 6
3. Were you in attendance at the Route 91 Harvest Festival the day of the shooting?
 - Yes → continue to question 4
 - No → skip to question 6
4. Were you in attendance at the Route 91 Harvest Festival at the time when the shooting occurred?
 - Yes → continue to question 5
 - No → skip to question 6
5. Were you physically injured as a result of the shooting?
 - Yes → continue to question 6
 - No → continue to question 6
6. Were any of your family members, close friends, or other people with whom you have a close relationship to in attendance at the Route 91 Harvest Festival during the shooting?
 - Yes → continue to question 7
 - No → skip to question 8
7. Were any of these people physically injured as a result of the shooting?
 - Yes → continue to question 8
 - No → continue to question 8
8. To your knowledge, were any acquaintances of yours or individuals you know of/are associated with in some way (e.g., friend-of-a-friend, co-worker, classmate) in attendance at the Route 91 Harvest Festival during the shooting?
 - Yes → continue to question 9
 - No → skip to question 10
9. To your knowledge, were any of these people physically injured as a result of the shooting?

- Yes → continue to question 10
 - No → continue to question 10
10. Have you ever lived in Las Vegas, Nevada or the surrounding area (e.g., Clark County)?
- Yes → continue to question 11
 - No → continue to question 11
11. Do you have family currently living in Las Vegas, Nevada or the surrounding area (e.g., Clark County)?
- Yes → continue to question 12
 - No → continue to question 12
12. Do you have friends currently living in Las Vegas, Nevada or the surrounding area (e.g., Clark County)?
- Yes → continue to question 13
 - No → continue to question 13
13. Have you ever traveled to and/or visited Las Vegas, Nevada or the surrounding area (e.g., Clark County)?
- Yes → continue to question 14
 - No → continue to question 14
14. Do you have any other connection or association with Las Vegas, Nevada or the surrounding area (e.g., Clark County)?
- Yes → continue to question 15
 - No → continue to question 16
15. If yes, please specify below.
- Text box for response → continue to question 16
16. Do you enjoy country music?
- Yes
 - No

2. Impact of Events Scale

Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate to the best of your recollection, how distressing each difficulty was for you **DURING THE WEEK IMMEDIATELY FOLLOWING** the Las Vegas Shooting. How much were you distressed or bothered by these difficulties? (0=Not at all, 1=A little bit, 2=Moderately, 3=Quite a bit, 4=Extremely)

*** A Likert scale will appear for each question once put into the survey program.

- 17. Any reminder brought back feelings about it
- 18. I had trouble staying asleep
- 19. Other things kept making me think about it
- 20. I felt irritable and angry
- 21. I avoided letting myself get upset when I thought about it or was reminded of it

22. I thought about it when I didn't mean to
23. I felt as if it hadn't happened or wasn't real
24. I stayed away from reminder of it
25. Pictures about it popped into my mind
26. I was jumpy and easily startled
27. I tried not to think about it
28. I was aware that I still had a lot of feelings about it, but I didn't deal with them
29. My feelings about it were kind of numb
30. I found myself acting or feeling like I was back at that time
31. I had trouble falling asleep
32. I had waves of strong feelings about it
33. I tried to remove it from my memory
34. I had trouble concentrating
35. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart
36. I had dreams about it
37. I felt watchful and on-guard
38. I tried not to talk about it

Sometimes people continue to have difficulties long after a stressful life event. Please read each item, and indicate how distressing each difficulty has been for you **DURING THE PAST SEVEN DAYS** with respect to the Las Vegas Shooting that occurred on October 1st, 2017. How much have you been distressed or bothered by these difficulties? (0=Not at all, 1=A little bit, 2=Moderately, 3=Quite a bit, 4=Extremely)

39. Any reminder brought back feelings about it
40. I had trouble staying asleep
41. Other things kept making me think about it
42. I felt irritable and angry
43. I avoided letting myself get upset when I thought about it or was reminded of it
44. I thought about it when I didn't mean to
45. I felt as if it hadn't happened or wasn't real
46. I stayed away from reminder of it
47. Pictures about it popped into my mind
48. I was jumpy and easily startled
49. I tried not to think about it
50. I was aware that I still had a lot of feelings about it, but I didn't deal with them
51. My feelings about it were kind of numb
52. I found myself acting or feeling like I was back at that time
53. I had trouble falling asleep
54. I had waves of strong feelings about it
55. I tried to remove it from my memory

- 56. I had trouble concentrating
- 57. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart
- 58. I had dreams about it
- 59. I felt watchful and on-guard
- 60. I tried not to talk about it

3. Awareness, participation, and usefulness of campus resources

The following questions refer to events, activities, and resources that occurred on the UNR campus in response to the Las Vegas shooting.

61. Which, if any, of the following UNR events, activities, or resources that occurred in response to the Las Vegas shooting were you aware of? (Check all that apply)
- a) Counseling drop-in sessions
 - b) Counseling support groups
 - c) Take 5- Paws for Love (therapy dogs in the Knowledge Center)
 - d) Extended walk-in hours in the counseling center on campus
 - e) Grief Support Consultations
 - f) Candlelight vigil, sponsored by ASUN
 - g) Blood Drives
 - h) Fundraisers for victims (e.g., bake sales)
 - i) I did not hear about any of these.
 - j) Other (Please specify below)
 - _____
62. Did you attend any of the events, participate in any of the activities, or utilize any of the supports IN THE TWO WEEKS FOLLOWING the Las Vegas shooting? (Check all that apply)
- a) Counseling drop-in support groups
 - If checked, please rate how helpful you found utilization of this resource to your own psychological well-being. (0=Not helpful at all, 1=Somewhat helpful, 2=Very helpful, 3=Extremely Helpful)
 - b) Take 5- Paws for Love (therapy dogs in the Knowledge Center)
 - If checked, please rate how helpful you found utilization of this resource to your own psychological well-being. (0=Not helpful at all, 1=Somewhat helpful, 2=Very helpful, 3=Extremely Helpful)
 - c) Extended walk-in hours in the counseling center on campus
 - If checked, please rate how helpful you found utilization of this resource to your own psychological well-being. (0=Not helpful at all, 1=Somewhat helpful, 2=Very helpful, 3=Extremely Helpful)
 - d) Grief Support Consultations

- If checked, please rate how helpful you found utilization of this resource to your own psychological well-being. (0=Not helpful at all, 1=Somewhat helpful, 2=Very helpful, 3=Extremely Helpful)
- e) Candlelight vigil
 - If checked, please rate how helpful you found participation in this event to your own psychological well-being. (0=Not helpful at all, 1=Somewhat helpful, 2=Very helpful, 3=Extremely Helpful)
- f) Blood Drives
 - If checked, please rate how helpful you found participation in this activity to your own psychological well-being. (0=Not helpful at all, 1=Somewhat helpful, 2=Very helpful, 3=Extremely Helpful)
- g) Fundraisers for victims
 - If checked, please rate how helpful you found participation in this activity to your own psychological well-being. (0=Not helpful at all, 1=Somewhat helpful, 2=Very helpful, 3=Extremely Helpful)
- h) I did not attend/utilize any of these.
- i) Other (Please specify below)
 - _____

63. Please indicate whether you continue to utilize any of the following services or participate in any of the following activities.

- Counseling services
- Donating blood specifically to help Clark County
- Volunteering to help victims of the shooting and their loved ones.
- Fundraising to help victims of the shooting and their loved ones
- None of the above
- Other (Please specify below)

• _____

64. Given your own level of distress (or lack thereof) in the weeks immediately following the Las Vegas shooting, which of the events, activities, or resources offered on the UNR campus did you find the most helpful in regards to regaining a sense of normalcy and/or improving psychological well-being?

- Open text box

65. Given your own level of distress (or lack thereof) in the weeks immediately following the Las Vegas shooting, from whom did you get the most support (e.g., friends, family, university clubs, counseling services...)?

- Open text box

66. Were any of your classes cancelled in response to the Las Vegas shooting?

- Yes
- No

67. Did any of your professors discuss the event before/during/after class?
- Yes
 - No
68. Did any of your professors discuss the resources being offered after the shooting?
- Yes
 - No
69. Given your own level of distress (or lack thereof) and the level of distress you may have observed among other students in the weeks immediately following the Las Vegas shooting, do you think the responses by the UNR administration, faculty, staff, and campus organizations adequately and appropriately addressed the needs of the UNR student body? Explain.
70. One of the main reasons for conducting this survey is to provide insight to university administrators, faculty, and staff, as to how to best meet the needs of students after a tragic event. If there is anything else you would like to add (e.g., general comments, suggestions, things you feel are important to share), please do so here.
- Open text box.

4. Demographics

71. What is your current class standing?
- Freshman
 - Sophomore
 - Junior
 - Senior
 - Post-Bac/Graduate
72. Which college or school is your major area of study within? (Select all that apply)
- College of Agriculture, Biotechnology and Natural Resources
 - College of Business
 - College of Education
 - College of Engineering
 - College of Liberal Arts
 - College of Science
 - Division of Health Sciences
 - The Reynolds School of Journalism
 - Graduate School
73. What is your age group?
- Under 18
 - 18-20
 - 20-22
 - 23-25
 - 26-28

- 28-30
 - Above 30
74. What is your racial or ethnic identification? (Select all that apply)
- American Indian or Alaska Native
 - Black, Afro-Caribbean, or African American
 - East Asian or Asian American
 - Latino or Hispanic American
 - Middle Eastern or Arab American
 - Native Hawaiian or Other Pacific Islander
 - South Asian or Indian American
 - White or Caucasian
 - Other, please specify
75. What is your gender identity?
- Male
 - Female
 - Non-binary/transgender/other
 - I prefer not to respond.
76. Which of the following describes your current living situation?
- Residence hall
 - Fraternity/Sorority housing
 - At home
 - Off-campus

Thank you for taking the time to complete this survey. You may enter to win a Starbucks gift card here. If you have any questions/concerns about this study, please feel free to email dominiquebarizone@gmail.com or ldeflorio@unr.edu.

Appendix B

IMPACT OF EVENTS SCALE-Revised (IES-R)

INSTRUCTIONS: Below is a list of difficulties people sometimes have after stressful life events. Please read each item, and then indicate how distressing each difficulty has been for you DURING THE PAST SEVEN DAYS with respect to _____ (event) that occurred on _____ (date). How much have you been distressed or bothered by these difficulties?

	Not at all	A little bit	Moderately	Quite a bit	Extremely
1. Any reminder brought back feelings about it	0	1	2	3	4
2. I had trouble staying asleep	0	1	2	3	4
3. Other things kept making me think about it.	0	1	2	3	4
4. I felt irritable and angry	0	1	2	3	4
5. I avoided letting myself get upset when I thought about it or was reminded of it	0	1	2	3	4
6. I thought about it when I didn't mean to	0	1	2	3	4
7. I felt as if it hadn't happened or wasn't real.	0	1	2	3	4
8. I stayed away from reminders of it.	0	1	2	3	4
9. Pictures about it popped into my mind.	0	1	2	3	4
10. I was jumpy and easily startled.	0	1	2	3	4
11. I tried not to think about it.	0	1	2	3	4
12. I was aware that I still had a lot of feelings about it, but I didn't deal with them.	0	1	2	3	4
13. My feelings about it were kind of numb.	0	1	2	3	4
14. I found myself acting or feeling like I was back at that time.	0	1	2	3	4
15. I had trouble falling asleep.	0	1	2	3	4
16. I had waves of strong feelings about it.	0	1	2	3	4
17. I tried to remove it from my memory.	0	1	2	3	4
18. I had trouble concentrating.	0	1	2	3	4
19. Reminders of it caused me to have physical reactions, such as sweating, trouble breathing, nausea, or a pounding heart.	0	1	2	3	4
20. I had dreams about it.	0	1	2	3	4
21. I felt watchful and on-guard.	0	1	2	3	4
22. I tried not to talk about it.	0	1	2	3	4

Total IES-R Score: _____

INT: 1, 2, 3, 6, 9, 14, 16, 20
 AVD: 5, 7, 8, 11, 12, 13, 17, 22
 HYP: 4, 10, 15, 18, 19, 21

Weiss, D.S. (2007). The Impact of Event Scale-Revised. In J.P. Wilson, & T.M. Keane (Eds.) *Assessing psychological trauma and PTSD: a practitioner's handbook* (2nd ed., pp. 168-189). New York: Guilford Press.