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A Study Investigating the Lingering Emotional and Psychological Distress of September 11, 2001 on College Age Students

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A STUDY INVESTIGATING THE LINGERING EMOTIONAL AND
PSYCHOLOGICAL DISTRESS OF SEPTEMBER 11, 2001 ON COLLEGE AGE
STUDENTS

A project based upon an independent investigation, submitted in partial
fulfillment of the requirement for the degree of Bachelor of Arts in Social Work.

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Abstract

This study was concerned with understanding the lingering psychological and emotional effects that September 11th continues to play on college age students today and the different factors that impacted their current feelings and emotions. Originally, the researcher wished to explore the relationship between the students' geographic locations on September 11th, 2001 and their level of psychological and emotional distress in its aftermath. Unfortunately, the responses available for the variable geographic location could not be analyzed in a way that they could be used for this study. The study did, however, provide feedback based on the relationships between other variables indicating whether or not a nationwide tragedy such as 9/11 continues to impact the life choices and behaviors of this college age population. A questionnaire consisting of five sections assessing emotional and psychological reactions of college age students immediately after September 11, 2001 and then again today was distributed at a Catholic College in the New England area. Participants included 69 undergraduate college age students (M= 20.05 years). Results from this study indicate that these particular college age students may fall under the title "Generation 9/11;" however, the definition would need to be altered in order to accurately represent the significant positive changes and growth that have impacted these particular population of students and the future direction of their lives.

This study will focus on educating the reader about the lingering psychological affects from the September 11 on college age students. It will focus on researching where students were geographically located on 9/11 analyzing how and if this has played a role in their feelings connected with September 11 following the seventh anniversary of the attacks. The goal is that by identifying how college students have reacted in the face of a national tragedy, even years after it has occurred, colleges, universities, and those in the helping professions will be better able to identify and assist students who may be experiencing emotional distress directly after such an event happens. The hope is gathering this type of information will serve as a guide in helping professionals identify which symptoms of emotional distress may linger longer in some students compared to others and understanding the reasons as to why this occurs.

I. Introduction

A. Problem Formulation- Explanation of collective trauma and why 9/11 is categorized as one. Identify where college students' were located when the terrorist attacks on September 11 occurred and how this have may have impacted emotional distress they suffered from and may continue to be affected by even seven years after the attacks occurred.

B. Problem Justification- To raise awareness for those in the helping profession of the possible lingering symptoms of post-traumatic stress disorder and other signs of emotional distress in college students who have been affected by 9/11 in relation to where they were located in the United States when the terrorist attacks occurred. To give recommendations for the most appropriate coping skills to help these students deal with their emotions, feeling, and concerns that are have been identified as stemming from these attacks, even years after they have occurred.

II. Main Points (geographic location not the sole determining factor in lingering emotional distress for college students)

A. Overview of past traumatic events in the nation's history

1. Collective Trauma

a. Definition

b. Comparison to individual trauma

2.. Examples of traumatic events affecting the whole nation

- a. Hurricane Katrina
 - b. Oklahoma city bombings
 - direct exposure
 - media exposure
 - psychological effects
- B. Effects of trauma on brains of mentally healthy individuals
1. Description of events (trauma) that can cause changes in brain functioning
 - a. Identification of the amygdalae (the parts of the brain that judge emotional intensity and make emotional memories)
 - b. Populations most likely affected by trauma
 2. Geographic location
 - a. Hyperactive amygdalae
 - b. Relation to 9/11
- C. Reach of Terrorism/Terrorist Acts
1. Definition of terrorism
 - a. How Americans perceive this term?
 - b. What impacts their perceptions?
 2. Events of 9/11
 - a. Extent of exposure to the nation
 - b. Indirectly affected populations
- D. Research studies conducted after 9/11
1. Identification of who was affected
 - a. Direct victims
 - b. Direct exposure from media
 - c. Indirect exposure from media
 2. Mental health in the aftermath of 9/11
 - a. Populations affected
 - b. Identification of emotional distress
 - definition of post-traumatic stress disorder
 - statistics indicating duration of symptoms
- E. Lingering symptoms will be seen nationwide in college students
1. College students as one of the most vulnerable populations following a national tragedy
 - a. Statistics of college students and emotional disturbances directly after 9/11
 - b. How this may determine lingering effects of anxiety, depression, or PTSD in students years later.
 - worries about job locations/travel planes/uncertainties about the future
 2. Media Exposure

- a. Media exposure to national tragedy to a national disaster can be just as emotionally scarring as witnessing the attacks firsthand
 - b. Disturbing images can replay over and over in students' minds.
- 3. Mental health prior to September 11
 - a. Increase chance to suffer PTSD or other emotional distress w/prior history of mental illness, anxiety, emotional distress
 - b. Struggling with new fears/insecurities/dealing with the realities of the world
- F. Extent of populations affected
 - 1. 9/11 as a collective trauma
 - a. Volunteers, mental health professionals, workers from all around the nation responded
 - b. Extent of exposure cannot be limited to one specific area
- III. Opposing Points: Lingering signs of emotional distress in college students will only remain prevalent in those individuals who were geographically close to the actual attacks.
 - A. Psychological Affects on College Students
 - 1. Living in the New Age Terrorism
 - a. 9/11 generation
 - b. Comparison of direct and non-direct exposure
 - 2. Role that geographic location has played.
 - a. Students are affected nationwide initially
 - b. Variety of emotional distress
 - duration of symptoms
 - B. Reasons why symptoms may not linger
 - 1. Problems w/ media attention surrounding traumatic events
 - a. Misrepresentation of facts immediately following the attacks
 - b. Years later, not playing constant reminders
 - 2. Level of expression following the attacks
 - a. Myths of not coping immediately
 - Psychological debriefing & Critical Incident Stress debriefing
 - b. Those may likely to immediately express concerns & feelings
 - long-term outcomes
 - 3. Level of exposure to the events
 - a. Removed geographically (not living close to the cities actually attacked)
 - b. Did not experience personal losses
 - IV. Hypothesis
 - A. Role of geographical location

1. Will impact students' feelings associated with 9/11
 2. Those closest to the attacks (geographically) will have the most significant feelings towards 9/11
- B. Relationship between geographic location and lingering emotional distress on college students
1. Will not be the sole determining factor for lingering effects
 2. Directly affected states/communities outside of those attacked
- V. Methodology
- A. Sample
1. What type:
 - 69 undergraduate students from Providence College
 2. How they were selected:
 - Snowball sampling
 - Convenient sample
 - Distribute questionnaires in classrooms
- B. Data Gathering:
1. What method:
 - Quantitative study
 - Questionnaire
 2. Independent Variable: Geographic location
 3. Dependent Variable: Level of emotional & psychological distress
- C. Data Analysis
- Used SPSS
 - Ran correlations between variables, mean scores, & factor analysis
- D. Findings
- Mean scores for immediate reactions did not exceed 3
 - Significant positive relationship between total immediate reactions & coping mechanism #1, #3, & #6
 - Significant negative relationship between total immediate reactions & coping mechanism #5
 - Significant positive relationship existed between total immediate reactions and overall posttraumatic growth
 - Significant positive relationship between appreciation for life and total immediate reactions
- VI. Conclusion:
- 9/11 does impact the lives of college students
 - College students can have positive growth and change as a result of 9/11

- Importance of coping mechanisms in reducing lasting distress

Introduction

The terrorist attacks that occurred on September 11, 2001 not only tragically claimed the lives of more than 3,000 individuals, but also exposed the citizens of the United States to one of the most traumatic and unprecedented events in the history of the nation. While thousands of residents in the cities of New York and Washington D.C. directly witnessed the terrorist attacks on the World Trade Centers and the Pentagon, millions of others viewed the attacks that morning through extensive media coverage (Silver, Holman, McIntosh, Poulin, & Gil-Rivas, 2002). A nationwide longitudinal study that was conducted in 2002 indicated that an increase in post-traumatic stress disorder (PTSD) was found to be prevalent throughout the general population of the United States, even in the months following September 11th (Silver et al., 2004). Immediately following the attacks, information and data was being collected on a regular basis concerning reactions, emotions, and fears from all different populations and persons within the nation. As the events of September 11th continue to move further into our nation's history, research surrounding this topic area is beginning to decrease (Bosco & Harvey, 2008). This is especially concerning for youth who are at higher risks for developing depression and maladaptive behaviors when exposed to stressful life events "since they tend to have low levels of effective coping skills, intrapersonal resources, and social support" (Seo, Blair, Torabi, & Kaldahl, 2004, pg. 20). The information and data gathered from this particular study will attempt to fill in the gaps of evidence based research surrounding the lingering psychological and emotional effects of September 11th on college age students.

The most horrific domestic terrorist attack to take place against the United States, prior to September 11th occurred with the bombing of the Murrah Federal Building in

Oklahoma City (DeRoma, Saylor, Swickert, Sinisi, Marable, & Vickery, 2003).

Research taken after this event showed that in response to this terrorist attack, emotional responses varied greatly across the United States, even when information was collected from a uniform sample population. The staggering effects of September 11th have far outnumbered those from the Oklahoma City bombing. Those affected have not only included individuals directly victimized by the attacks or located within a close proximity to the site, but also citizens across the nation who viewed the unforgettable images miles away by television or other various forms of media (DeRoma et al., 2003). It is important to note that when a trauma, such as September 11th occurs on this type of national level, the degree to which individuals are exposed is far beyond the scope of the direct victims (Silver et al., 2002).

A longitudinal study conducted in 2002 to assess the psychological responses to September 11th concluded that there was a direct relationship between the drastic rises of post traumatic stress disorder (PTSD) in the nation following the attacks, despite the distance the respondents may have been located from the cities directly targeted (Silver, et al., 2002). Symptoms related to PTSD include, but are not limited to, “repeated, disturbing memories, thoughts, or dreams; having difficulty concentrating; trouble falling asleep; increased irritability; or increased incidents of angry outbursts” (National Institute of Mental Health, as cited in Seo et al., 2004, pg. 20). The reports indicated that in the areas outside of New York City, 17% of the United States’ population experienced PTSD symptoms and 5.8% continued to show signs six months after the attacks (Silver et al., 2002).

General knowledge about appropriate coping skills for the various kinds of distress and concern that may be a consequence of a national trauma, like September 11th, is limited (Silver et al., 2002). Several different ideas, theories, and potential myths exist in terms of how professionals should appropriately respond to those experiencing emotional distress in the wake of such traumatic and potentially life-altering events. In order for clinicians, social workers, and other professionals to accurately identify and treat potential risk factors, more information and data must be collected about the lingering effects of anxiety and anxiousness in the aftermath of September 11th. Only in providing accurate and up-to-date research can professionals hope to create more concrete, universal and successful intervention methods for such individuals who may be struggling to cope with emotional disturbances, such as PTSD (Silver et al., 2002).

College students make up a population that needs to be carefully studied since the terrorist attacks have occurred during their foremost years of development. These students often form their principal ideologies, values, and beliefs throughout this very influential period of their lives. The question of whether this age of terrorism will ever become extinct is a high topic of concern that previous generations never had to contemplate. By studying the effects of September 11th on students' anxiety levels and workplace perceptions directly after the attacks, a population of college age students indicated more awareness surrounding the unpredictability of the world in which they are now living. They indicated that their previously held beliefs and assumptions about the future would surely be challenged during the course of the next several years (Bosco et al., 2008). After living through such traumatic events, schools, administrations, and clinicians need to be aware of the struggles that college age students may now be

experiencing. These students now must live in such a world plagued with acts of terrorism that they once previously believed to be just and fair. In order for the healing process to be successful at all levels, those in the helping profession must remain vigilant of the significant distance such trauma can travel, impacting students' not only directly victimized by the attacks or located geographically to the cities affected, but those living in all corners of the nation (DeRoma et al., 2003). By exploring the relationship between the students' geographic locations on September 11th, 2001 and their level of psychological and emotional distress in its aftermath, this study will provide important feedback for determining the extent to which a nationwide tragedy, such as the terrorist attacks on 9/11, continues to impact the life choices and behaviors of this seemingly vulnerable population.

Literature Review

Collective trauma in national tragedies

The entire nation of the United States has suffered from a wide array of tragedies over the course of its history. Events ranging from domestic attacks, such as the Oklahoma City bombings, natural disasters like Hurricane Katrina, and the unforgettable September 11th terrorist attacks, have impacted our nation on unimaginable levels. These large-scale events have affected citizens all across the country, regardless of their level of exposure. As opposed to other traumas where losses may only be felt by one or several individuals, such as the death of a loved one, these large-scale events can be classified as collective traumas. Under the definition of a collective trauma and in relation to the United States, adverse effects of the event are felt by people across the country, "even though the majority of them did not suffer direct and tangible losses." (Seery, Silver,

Holman, Ence, & Chu, 2008, p. 658). An event caused by national enemies, such as 9/11, is more likely to cause societal trauma reactions than natural disasters. Research has shown that in response to a national trauma individuals will report experiencing symptoms that do in fact reach clinical levels because the event has “shattered individuals feeling of realness, including collective assumptions as a nation about security, innocence, and inviolability” (Honos-Webb et al., 2006, p. 76). Citizens all across the country collectively feel attacked by the enemy as their personal and national security is threatened, enabling them to identify with those who were directly targeted by such intentional acts of violence (Honos-Webb, Sunwolf, Hart, & Scalise, 2006).

After the catastrophic occurrence of Hurricane Katrina, the nation was left to deal with countless losses and unimaginable destruction. Individuals who were located miles away felt the impacts as the tragedy unfolded through extensive media coverage available to citizens in locations throughout the entire United States (Honos-Webbs et al., 2006). By conducting research after the bombing of the Murrah Federal Building in Oklahoma City, the pivotal role that the media played in contributing to indirect exposure across the nation was well noted. After completing an evaluation of students in Oklahoma City seven weeks following the bombing, a significant relationship was found between television watching and symptoms of post-traumatic stress disorder (DeRoma, et al., 2003). In addition, this same investigation concluded that the amount of exposure six-grade students one hundred miles away from Oklahoma City had to media broadcasts was a significant indicator of the level of post-traumatic stress disorder they would encounter (DeRoma, et. al, 2003).

Since September 11th, the nation has moved into a new era filled with insecurities, as citizens are not only concerned with the countries' overall security, but now must question their own safety and the United States' ability to protect them and their families against future terrorist attacks. Terrorism is defined as “politically [including ideologically, religiously or socially—but not criminally] motivated violence, directed generally against non-combatants, intended to shock and terrify, to achieve a strategic outcome” (Bosco & Harvey, 2008, p. 895). This form of extreme violence is now an ever lingering fear that constantly plagues the lives of millions of Americans. In a study that was conducted in 2003 by the Columbia University Mailman School of Public Health, findings indicated that out of the population of New York residents and a national sample of citizens who were surveyed, 76% of Americans and 81% of those living in New York were concerned or highly concerned about the possibility of a future attack on the United States. More specifically, 50% of Americans and 70% of New Yorkers indicated that they were concerned about their personal and/or families' safety when it came to the topic of terrorism (Bosco & Harvey, 2008).

Lingering emotional and psychological distress

The events that occurred on September 11th, 2001 directly took the lives of more than 3,000 individuals and left the nation as a whole in a state of complete shock and devastation. After the attacks occurred, three noteworthy studies were conducted nationwide to determine the levels of psychological and emotional distress in Americans located throughout the country (Lindsey, Fugere, & Chan, 2007). Reports showed that months after the attacks, an increase in post-traumatic stress disorder (PTSD) was found in the general population of the United States, even for those who were geographically

located a significant distance away from where the attacks actually occurred. Following the week of the attacks, a survey of 1,200 Americans all over the United States found that 71% felt depressed, 50% were reporting difficulty sleeping, and 33% had trouble concentrating (Lindsey et al., 2007). Elevated levels of stress were very apparent in those living far distances from where the original attacks took place and symptoms of depression throughout the United States escalated for four weeks after the attacks, but then dropped to original levels afterwards.

In a study that was conducted in 2002 to understand the relationship between psychological responses and geographic location, data showed that even six months after the attacks, effects on individuals across the country, including symptoms of PTSD, remained evident (Silver et al., 2002). The majority of those involved in this research were not directly affected by the attacks and reported having “substantial anxiety about future terrorist attacks personally affecting themselves or those close to them” (Silver et al, p. 11). This study affirmed the fact that the extent to which individuals were affected by such an event as September 11th could not be limited by measuring their tangible losses or direct exposure levels.

Factors impacting victimization

Individuals considered direct victims of September 11th are presumably thought to feel the most lingering effects from the terrorist attacks. This group encompasses individuals who were actually present during the attacks, survivors of the attacks, or had a family member who was killed or injured as result of the attacks (Whalley & Brewin, 2007). However, there is also a portion of the country’s population who can be classified as indirect victims that will continue to deal with emotions such as fear and extreme

anxiety following an event such as September 11th. This population has been reported to include individuals in minority groups, as well as those persons with a past history of emotional distress and or psychiatric disorders (Whalley & Brewin, 2007). For these groups the simple acts of viewing media coverage to hearing discussions around terrorist attacks can cause high levels of stress, anxiety, and insecurities to be generated (Whalley & Brewin, 2007).

It is important to note, however, that individuals may not fit or meet these criteria but may still be affected. Honos-Webb et al. (2006) stated that:

The mechanism by which all members of a nation would be vulnerable to trauma reactions following a historical catastrophe involve the heightened sense of collectivity individuals feel when attacked by a national enemy and the identification with those who were directly affected by such intentional attack (p. 76).

Individuals who report trauma symptoms in the aftermath of such national tragedies must be encouraged to express their feelings. A college age student from a university in Northern California who participated in a study to assess trauma symptoms in relation to September 11th revealed the discouragement she received when trying to disclose feelings of emotional and psychological distress in the wake of September 11th. The therapist assigned to her case claimed that such reactions could not be directly related to the event since the student had not been directly affected by the attacks and the primary focus of sessions should be the patient's own personal losses (Honos-Webb, et. al, 2006). The possibility that an individual who was not directly impacted by the terrorist attacks

but still evidences signs of distress in the aftermath of a national tragedy should never be immediately dismissed (Honos-Webb et al., 2006).

Impacts of 9/11 on college age students

College age students are an especially vulnerable population following a national tragedy such as September 11th. Research conducted on this particular population showed that several life changes occurred for them after the attacks took place, including becoming increasingly more emotional and anxious. The events of September 11th have occurred during an especially vulnerable period of development for these individuals. College age students must now worry about the future that their generation will hold for them and the possibility that more Americans will die at the hands of terrorists. These “young millenials will feel the impact even if they don’t recall the event because they will see the after effects. Things will be different for their everyday lives even though they may not connect everything with 9/11” (Bosco, & Harvey, 2008, p. 4). College seniors in 2007 who were interviewed in an article released on CNN.com recognized the changes that had occurred in their lives since September 11th when prior to the 2001 terrorist attacks, for example, the scores on SAT tests were of their utmost priority. Post 9/11, they indicated experiencing difficulties deciding on majors, sudden interests in increasing their knowledge of Islam and the Middle East, as well as feeling mixed emotions towards the United States’ government and their own previously held religious beliefs (Bosco, & Harvey, 2008).

Individuals within this population of students, although they may not be classified as direct victims, have been shown to exhibit symptoms of post traumatic stress disorder in the aftermath of 9/11 just by witnessing the events of the day through media exposure.

Extensive research has confirmed the fact that “television brought September 11th to a new level of community disaster, affecting the community of U.S. citizens distant from the attack” (DeRoma, et. al, 2003, p. 57). As the possibility of future attacks threatens the country’s safety and security, college students have continued to express feelings of anxiety, sadness, grief, and depression. Several drastic changes in college students’ feelings and ways of living have been indicated, such as showing more appreciation towards family and friends, maintaining frequent contact with these individuals, and frequently relying on religion and prayer for coping methods. Changes in transportation methods and a decrease in air travel were also significantly noted (Seo et. al, 2004). In a study that surveyed seventy-five college age students both one week following 9/11 and then again eleven weeks later in a liberal arts college 180 miles away from Washington D.C., the data indicated that college students continued to suffer from significant psychological and emotional reactions in the aftermath of 9/11. These students did not directly witness the attacks, but were obviously still affected by what occurred that day (Lindsey et al., 2007). Some of the reported changes in behavior included difficulty sleeping, eating, concentrating, as well as “trouble shaking off the blues even with help from family and friends” (Lindsey et al., 2007, p. 5).

Gender differences between males and females have also been studied in relation to the lingering affects of the 2001 terrorist attacks on college age students. Symptoms of PTSD were found to be more prevalent in male students than females. Female students openly reported feeling highly concerned about their safety and security. In order to cope with their concerns, females were much more likely to turn to religion or some form of spirituality to ease their worries than males. It is possible that the females’ use of such

coping mechanisms, as previously described, is directly related to the lower levels of PTSD symptoms they reported experiencing, as males are typically known to be more reluctant in freely expressing their emotions and feelings than females (Seo et al., 2004).

In addition, ethnic background has been shown as a contributing factor in the lasting effects of September 11th for college students. Four Midwestern universities surveyed 1,059 students, inquiring about their changes in behavior and lifestyles since the terrorist attacks. Significant differences were noted between Caucasian, African American, and Asian American students. African American students were 72% less likely to become show signs of emotional disturbances when reminded of the attacks and 71% less likely to be concerned about improving homeland security in the United States than Caucasian students. In comparison to Caucasian students, Asian Americans reported being 31.7% more likely to change transportation methods, 25.9% more like to have a surplus of food, gas, or supplies and 16.1% more likely to be concerned about improving homeland security (Seo et. al, 2004).

College age students across the United States are likely to exhibit feelings of anxiety, fear, and helplessness in the aftermath of September 11th. When acts of terrorism occur, such events increase the population who will likely feel the effects of the attacks and “are unique in that the threat to the national security widens the scope of those indirectly affected by the event” (DeRoma et al., p. 50). The September 11th terrorist attacks not only affected the individuals who were directly impacted by the event and suffered substantial losses, but also the millions of those across the nation who witnessed the attacks through media and television viewing (DeRoma et al., 2003). In addition, knowledge of individuals who were personal victims of the attacks, served as

rescue, recovery, and clean-up workers, or where otherwise present when the attacks occurred increased the likelihood that a person would feel the indirect effects of the event. Research conducted from the Oklahoma City bombing found that youth who knew of direct victims from the event, 41% of the sample population, had increased levels of PTSD (Liverant, Hofmann, & Litz, 2004). It is difficult to measure the extent of exposure citizens all across the United States had to 9/11, as “hundreds of thousands of people also witnessed traumatic events such as airplanes striking one or both towers; buildings collapsing and people fleeing, jumping, falling, suffering injury or dying. Millions of other people saw these events repeatedly on their televisions” (The World Trade Medical Working Group, 2008, p. 6). Lives were spontaneously disrupted all across the country proving that an event as colossal as 9/11 has the extensive power to shake the fundamental beliefs and behaviors of American citizens.

Impact of traumas on direct victims

According to the Annual Report on 9/11 Health released in 2008, individuals who were both directly and non-directly exposed to the terrorist attacks evidenced signs of posttraumatic stress disorder and emotional distress up to six months following the event. However, follow up research revealed that these symptoms quickly disappeared for the general population of the United States, particularly those individuals who were not directly affected (World Trade Medical Working Group, 2008). This six month period showed that for direct victims of 9/11, which includes those citizens dealing with the loss of a relative or friend, were located in the World Trade Center buildings when the attacks occurred, endured an injury on this particular day, were rescue or recovery workers, or sustained personal losses of property and jobs, symptoms of depression were much

higher than originally anticipated (World Trade Medical Working Group, 2008). In addition, geographic location from the site of a terrorist attack can also be used to predict the risk levels for other factors, including “fear for one’s safety, identification with or perceived similarity to victims, witnessing death and destruction, and changes in cognitive schemas” (Liverant et al., 2004, p. 128). Studies have identified that significant positive relationships exist between the distance of an individual’s residence to a terrorist attack and increased levels of psychological distress.

As a considerable amount of literature around this topic indicates, “direct victims of terrorist attacks are those most affected, usually by being physically present at the attack site or by having a close family member killed or injured” (Walley & Brewin, 2007, p. 4). Studies conducted in the aftermath of terrorist attacks all over the world have stated, quite unanimously, that within two years of the particular event, 30-40% of the individuals who were located closest to the site of the attack will likely be diagnosed with a clinical psychological, emotional, or mental disorder (Whalley & Brewin, 2007). Out of the 2,700 residents in the New York metropolitan area who were surveyed six months after the disaster, six percent of this population considered as direct victims of the attacks still reported feeling depressed. This was compared to the averages percentages of individuals located in a non-traumatized population, which ranged from 2.2 to 4.9%. (World Trade Medical Working Group, 2008).

Symptoms of lingering emotional and psychological distress have brought additional complications and created elevated levels of concern for this highly vulnerable population. When comparing levels of substance use in Manhattan residents a month prior to the September 11 attacks and in the six to nine month period following the

attacks, a 17.5% increase in alcohol consumption was noted, along with a 3% increase in marijuana use, and 10% in cigarette smoking. Symptoms of PTSD were found to be directly related to an increase in cigarette smoking at this time, while diagnoses of depression were being linked with cigarette smoking and alcohol consumption (World Trade Medical Working Group, 2008). Further studies conducted found “that greater exposure to the World Trade Center (WTC) disaster increased the likelihood of binge drinking or alcohol dependence among NYC residents” (World Trade Medical Working Group, 2008, p. 11).

An interesting new study conducted by researchers at Cornell found a relationship between geographic location and the brain’s reaction to emotional stimuli (Lang, 2007). In this study, trauma and long-lasting impacts were directly linked to the amygdalae, the sections of an individual’s brain that focus on emotions and have the ability to create memories out of these particular feelings. Trauma related events have been proven to make one’s brain, specifically the amygdalae more sensitive and thus increase the chances that an individual will develop symptoms of PTSD (Lang, 2007). Researchers now believe traumas, such as September 11th, impact directly affected populations by causing changes in their brains, that will “create vulnerability to developing future mental disorders” (Lang, 2007, p. 1). The fact that an individual has reported experiencing a trauma prior to 9/11 increases their chance of developing PTSD in the aftermath of the attacks (DeRoma et al., 2003). Three years after September 11th, those residents living closest to the World Trade Centers were found to have the most sensitive amygdalae and were still suffering from lingering emotional distress. Even though the symptoms they exhibited were not severe enough to be diagnosed as mental disorders at that time,

the brains of these individuals signaled much greater emotional reactions when shown photographs of faces that depicted rather fearful and frightened expressions.

“Generation 9/11”

The impact on college students and those who will become the future generation of the United States has been a continued area of study for researchers concerned with the lasting effects of collective traumas. These individuals have been characterized as the most vulnerable population in the aftermath of terrorist attacks whose personal choices and beliefs are likely to directly influence the future direction in which this country is headed. There was and continues to be an underlining assumption that in the months and years following September 11th, “significant shifts in college students’ attitudes will have an effect on the future—politics, economics, and social policy—so it is important to look for trends and to see if there’s any evidence of an emerging ‘Generation 9/11’” (Bosco & Harvey, 2008, p. 5). A study conducted to assess the extent of coping skills in a sample of 420 students from three colleges in Charleston, South Carolina, surprisingly found high levels of resiliency within this sample population. Twenty-four hours after the attacks occurred, subjects reported experiencing at least four symptoms of PTSD. However, signs of these symptoms drastically reduced after one day, supporting the claim that, “although we fear that people will never recover from a trauma of such horrific proportions, symptoms are reduced over time” (DeRoma et al, 2003, p. 58). In addition, a follow-up study was conducted to investigate on the perceptions of college age students and their preference of job placements one year after 9/11 and than again five years later. It stated that “today’s college students, who were just in high school or junior high school in 2001, have similar anxiety levels to those of college students at that time. Most still

have little or no anxiety about terrorism in general and the workplace in particular” (Bosco & Harvey, 2008, p. 8). Therefore, the researchers concluded that this population will not become the highly prophesized “Generation 9/11,” in which every life decision and choice they decide upon will have direct links to events of that day.

Effects of coping skills on lingering psychological and emotional distress

The use of coping skills has shown to be vital in the extent to which individuals are likely to sustain lasting psychological and emotional distress from 9/11, especially for the college age population (Liverant et al., 2004). Since September 11th has been identified as a collective trauma for citizens located across the nation, individuals who did not suffer direct and tangible losses were able to feel the impact of such a large scale event (Seery, Silver, Holman, Ence, & Chu, 2008). However, coping mechanisms have proved to impact the lasting effects that an individual indirectly exposed to 9/11 will endure. In fact, it is the basic assumption that the decision not to cope with and express one’s feelings in the aftermath of such a traumatic event will be potentially harmful to an individual’s overall mental health (Seery et al., 2008) The inclination to avoid the topic of trauma related symptoms has been linked to further risk factors including “negative affect, decreased self-esteem, and less successful adjustment” (DeRoma et al., 2003, p. 58). Several different methods of coping have been used in helping to reduce the prevalence of emotional distress, anxiety, depression and symptoms of PTSD for students indirectly affected by acts of terrorism. Although empirical evidence for these interventions has seen mixed results, psychological debriefing and critical-incident stress debriefing (CISD) have been used to help students cope with feelings of psychological and emotional distress in the aftermath of 9/11 (Honos-Webb et al., 2006). Through

these coping mechanisms, victims are encouraged to express thoughts, concerns, and emotions directly after the occurrence of a traumatic event (Seery et al., 2008).

A sample of college age students in South Carolina found that the use of coping techniques in the first twenty-four hours of September 11th were significant and showed immediate results, as initial symptoms of PTSD decreased (DeRoma et al., 2003). Since exposure to an event that causes mass violence will most likely cause shifts in students' basic beliefs about safety and security levels, as well as core values, there is a general understanding that initial levels of disturbance and disruption reported will be significant. A study of an indirectly affected sample population of college age students in Boston, Massachusetts had concluding results "supported by research demonstrating an initial increase and subsequent decrease in PTSD symptoms among victims of other disasters, as well as among Americans after September 11th" (Liverant et al., 2004, p. 136). Therefore, the fact that college students indirectly exposed to September 11th continue to feel distressed and exhibit high levels of anxieties may signify their refusal to engage in coping strategies (DeRoma et al., 2003; Liverant et al., 2004).

Interestingly, a relationship has been proven to exist between higher levels of PTSD and one's ability to construct positive thinking out of such a dire situation. College age students have proven to have the capacity of creating meaning in the midst of a national tragedy, as "post-traumatic growth changes may be a result of abrupt belief shifts that function to help an individual not only survive, but also thrive, in context of indirect exposure to traumatic events" (DeRoma et al., 2003, p. 59). The use and availability of information-seeking coping strategies have also been shown to improve overall mental health in the aftermath of September 11th. The implementation of certain

information-gathering materials, such as web-links to news, should be considered by colleges and universities “in an effort to promote coping associated with positive adjustment among students” (DeRoma et al, 2003, p. 58). However, although media coverage of a collective trauma, such as September 11th, has proven to benefit individuals across the nation, it is also important to note the negative affects that have resulted, as it has increased the population of individuals who felt the impacts from this day. Even though avoidance strategies are not recommended, continued viewing of events from September 11th broadcasted on televisions and through internet sites can cause mental health risks, including the development of psychological disorders (DeRoma et al., 2003).

Collective traumas are infamous for becoming the center of media attention and “the damage caused by misstatements and faulty conclusions drawn from intuition rather than empirical data can thus multiply beyond an individual client” (Seery et al., p. 666). False statements regarding terrorism issued by media personnel and news stations across the country, rather than solid empirical evidence, have contributed to the initial psychological and emotional distress on indirectly affected populations within the United States after 9/11. Psychologists and professionals must remain vigilant of the initial panic that may arise as individuals rely on such inaccurate sources for updates on safety levels facing the nation (Seery et al., 2008; Honos-Webb et al., 2006).

Geographic location as an indicator for lasting effects

Although citizens located throughout the United States most likely felt the initial impacts of September 11th, geographic location and one’s proximity to the site of the attacks have been proven in predicting lasting emotional and psychological distress of an individual over the course of time. Severity of exposure and loss as a direct result of

September 11th often raises the level of risk factors for mental health concerns in the wake of a national trauma for directly affected populations (Silver et al., 2002). A small sample of 180 college students located in Washington D.C. were surveyed one week and then again eleven weeks following September 11th to compare signs of continued depression and retention levels. Findings indicated that 9/11 did in fact play a significant role on individual's lives, creating increased levels of initial distress and disturbance (Lindsey, et al., 2007). However, as data gathered from the students indicated most signs of any depression or lingering psychological effects had deteriorated rapidly within the relatively short time period of eleven weeks (Lindsey et al., 2007). Coping strategies in the immediate aftermath of September 11th have proven to contribute significantly in creating an overall positive mental health status for citizens in our nation in the wake of such a disturbing national trauma (Silver et al., 2002).

Hypothesis

Significant studies conducted on national tragedies, such as terrorist attacks, have demonstrated the extensive impact that these events can have on citizens throughout an entire nation, regardless of an individual's actual proximity to the site of the attack (Honos-Webb et al., 2006). This study will attempt to demonstrate that geographic location is not the sole factor in determining the extent to which an individual will continue to feel the impact from September 11th. It is hypothesized that college students will continue to experience significant emotional and psychological distress in the wake of the September 11th attacks regardless of where they were geographically located on the day of the attacks.

Methodology

Participants

The participant population for this study consisted of 69 undergraduate students enrolled in a college in Providence, Rhode Island. A snowball sampling was used to identify participants for this study, as well as asking professors to distribute questionnaires within their classes. Each participant was given an informed consent form, (see Appendix A), which described the purpose of the study. The form indicated that the goal of the study was to identify any lingering psychological and emotional effects from the September 11th terrorist attacks on college age students today. It also stated that the participation in the study was not required. All students signed the informed consent and voluntarily participated in the study.

Instrument

Level of emotions and reactions in the immediate aftermath of 9/11 was measured with seven items. This portion of the questionnaire was adapted from Sattler (2002), which was comprised of seventeen items assessing symptoms related to acute stress disorder and nine items relating to somatic problems. Items were taken from this instrument that focused primarily on participants stress related symptoms and emotional well-being (i.e. “I got upset and/or angry easily”, “I felt irritable or on edge”, “I had difficulty sleeping”, etc). Participants were asked to indicate on what level they felt the statements accurately described their behaviors and emotions in the immediate aftermath of September 11th. A 5-point Likert Scale (1 = strongly agree, 2=disagree, 3 = neutral, 4 = agree, 5 = strongly agree) was used to indicate respondents’ answers.

Coping mechanisms were measured by adapting items from the Brief COPE

Inventory (Carver, 2009), an abbreviated version of the COPE Inventory comprised of twenty-eight items. This section of the questionnaire consisted of seventeen items taken from the Brief COPE Inventory which explored the coping mechanism that students utilized immediately after September 11th. Participants were asked identify how they coped with their emotions and feelings in the aftermath of 9/11. Examples included, “I expressed my negative feelings,” and “I tried to find comfort in my religion or spiritual beliefs. Participants used a 5-point Likert Scale (1 = strongly agree, 2 =disagree, 3 = neutral, 4 = agree, 5 = strongly agree) to indicate their answers.

The fourth section assessed current quality of life areas for participants based on the September 11th attacks. Participants were asked to complete the statement; I believe that 9/11 has caused me to (i.e. feel closer to one or more family members, feel as though I am more valuable to others). A 5-point Likert Scale (1 = strongly agree, 2 =disagree, 3 = neutral, 4 = agree, 5 = strongly agree) was used to indicate their responses. These thirteen items were adopted from Sattler et al. (2002), specifically the section of the survey focusing on the resources that participants lost and gained as a result of the September 11th terrorist attacks.

The final section of the questionnaire included items related to posttraumatic growth and psychological responses items adapted from Tedeschi & Calhoun (1996) and Sattler (2002). To assess posttraumatic growth (3 items), participants were asked to complete the following statement, “I believe that 9/11 has affected my life in the following ways” (i.e. I have new priorities about what is important in my life). The 3 items for psychosocial responses followed the statement “Because of 9/11 now, (i.e. I have a new respect for people living in my community, I am afraid I might lose my life or

be seriously injured because of a terrorist attack. Participants were asked to use a 5-point Likert Scale (1 = strongly agree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree) to indicate their responses (see Appendix B).

Results

Study sample

The research question in this study was concerned with understanding the lingering psychological and emotional effects that September 11th continues to play on college age students today and the different factors that impacted their current feelings and emotions. Participants included 69 undergraduate college age students (M= 20.05 years) who attended a Catholic college comprised of primarily upper middle class students. According to the descriptive statistics, 33.3% of the participants were seniors, 29.0% freshmen, 21.7% juniors, and 15.9% sophomores. Students identified themselves as belonging to one of five different choices depicting the various ethnicities within the college. The ethnic breakdown of the participants in the study were as following: 88.4% White, 4.3% Hispanic, 2.9% Other, and 1.4% Asian. In addition, participants were asked to identify whether or not they personally knew of a family member or friend who was killed or injured due to the September 11th attacks; 75% did not know such an individual, while 25% reported knowing a family member, friend, or both. In relation to how students were initially informed that the terrorist attacks had taken place, 53.6% learned through word of mouth, 24.6% watched in on television, 20.3% chose other, and 1.4% heard of the attacks on the radio. For those individuals who chose other, the majority identified learning of the attacks was through a school announcement or assembly.

Individual immediate reactions

This section asked students to identify their level of emotions and reactions in the immediate aftermath of September 11th. All seven statements were used to understand the level in which these terrorist attacks negatively impacted the lives of the participants at this time. Mean scores (Table 1) for each of the seven items indicated that most participants did not feel negatively affected by terrorist attacks, since most responses did not exceed neutral, which was equivalent to 3 on the Likert Scale.

Table 1: Mean scores for Immediate Reactions

Item Statistics			
	Mean	Std. Deviation	N
Immreac01	3.0870	.96618	69
Immreac02	2.9275	.89638	69
Immreac03	3.4348	1.03580	69
Immreac04	3.4638	.91683	69
Immreac05	2.4638	1.17047	69
Immreac06	2.5362	1.18296	69
Immreac07	2.5797	1.25330	69

Total immediate reactions

All seven items in the scale immediate reactions were added together to create a new variable entitled total immediate reactions. This variable was created to study the relationship between how students' behaviors and emotions were impacted in the immediate aftermath of September 11th and in what ways they coped with these types of distress. In addition, total immediate reactions and psychological growth were compared to determine what ways participants may or may not still be affected by the attacks and events from September 11th. Reliability tests were run and Cronbach's Alpha was equal to .809, justifying the creation of this new variable (Table 2).

Table 2: Cronbach Alpha of Total Immediate Reactions

Cronbach's Alpha	N of Items
.809	7

Correlations between total immediate Reactions and Coping Mechanisms

Pearson's correlation was used to calculate the relationship between total immediate reactions and each of the seven items on the coping mechanism scale utilized in the immediate aftermath of September 11th. These analyses indicated that a significant positive relationship existed between total immediate reactions and coping mechanism #1 "I kept saying to myself 'this isn't real'", ($r=.459$, $p<0.01$) (Table 3). This indicated that some participants reported feeling adversely affected by the terrorist attacks and recognized negative changes in their behaviors, such getting angry easily or feeling disoriented, but were not engaging in effective coping mechanisms. Rather, they indicated being unable to accept the reality that 9/11 had actually occurred.

A significant negative relationship also existed between total immediate reactions and coping mechanism #5, "I accepted the reality of the fact that 9/11 had happened" ($r=-.417$, $p<0.01$.) (Table 3). These results support past literature that as participants felt increasing emotionally and psychological distressed in the immediate aftermath of September 11th, the less likely they were to acknowledge the actuality of the terrorist attacks. Coping mechanism #3 "I received emotional support from others," ($r=.466$, $p<0.01$), and coping mechanism #6, "I expressed my negative feelings," ($r=.253$, $p<0.05$) also had significant positive relationship with the variable total immediate reactions.

Table 3: Correlations Between Total Immediate Reactions and Coping Mechanism

	totalimmreac	Copmec01	Copmec03	Copmec05	Copmec06
totalimmreac Pearson Correlation	1	.459**	.466**	-.417**	.253*
Sig. (2-tailed)		.000	.000	.000	.036
N	69	69	69	69	69

* Correlation is significant at the 0.05 level (2-tailed).

** Correlation is significant at the 0.01 level (2-tailed).

Overall posttraumatic growth

Items on the posttraumatic growth scale were computed together to form a new variable, overall posttraumatic growth (Table 4). Cronbach's Alpha was equal to .703, which justified creating a new variable totaling the scores of each individual item on the posttraumatic growth scale together.

Table 4: Cronbach: Alpha of Overall Posttraumatic Growth

Reliability Statistics	
Cronbach's Alpha	N of Items
.703	3

Correlations between total immediate reactions and overall posttraumatic growth

The relationship between total immediate reactions and overall posttraumatic growth was computed by using Pearson's correlation (Table 5). A significant positive relationship existed between these two variables, ($r=.471$, $p<0.01$). As participants identified feeling either significantly affected by the events of September 11th or relatively unaffected initially after the attacks took place seemed to determine how they would feel that September 11th is or is not affecting their lives. For instance, if participants strongly agreed that they were upset or angered easily initially after September 11th, the more likely they were to agree to the statements of posttraumatic growth such as, "I have new priorities about what is important in my life."

Table 5: Correlations Between Total Psychological Growth and Total Immediate Reactions

		totalpsychgrowth	totalimmreac
totalpsychgrowth	Pearson Correlation	1	.471**
	Sig. (2-tailed)		.000
	N	69	69
totalimmreac	Pearson Correlation	.471**	1
	Sig. (2-tailed)	.000	
	N	69	69

** . Correlation is significant at the 0.01 level (2-tailed).

Quality of Life Areas

A factor analysis was run for quality of life areas to determine if any variables had strong relationships with one another (Table 6). Results indicated that quality of life areas 02, “Feel as though I am more valuable to others,” 05, “Feel that my life has purpose,” 03, “Hold more appreciation for each day in my life,” 011, “Spend more time with loved ones,” 06, “To be more motivated to get things done” and 04, “Feel more confident that I can rely on people in times of trouble” were highly correlated with Factor 1.

Table 6: Factor Analysis of Quality of Life Areas

	Component
--	-----------

	1	2	3	4	5
Qauoflife02	.820	-.178	.290	-.010	-.105
Qauoflife05	.802	.022	-.038	.023	-.197
Qauoflife03	.757	-.195	.177	.188	-.289
Qauoflife011	.723	-.097	-.083	-.384	.126
Qauoflife06	.694	-.222	-.113	-.103	-.061
Qauoflife04	.625	-.152	-.320	-.161	.494
Qauoflife01	.523	-.447	.435	-.093	.368
Qauoflife08	.365	.689	-.176	-.390	-.100
cancelling	.234	.687	.265	.296	.268
Qauoflife07	.508	.680	-.127	-.160	-.277
avoiding	.000	.503	.653	-.032	.299
Qauoflife010	.341	.200	-.517	.476	.459
Qauoflife09	.525	.005	.024	.644	-.245

Extraction Method: Principal Component Analysis.

a. 5 components extracted.

Appreciation for Life

The six items under Quality of Life Areas, 02, 03, 04, 05, 06, and 011 were totaled together. The new variable, appreciation for life, was created from these six items to represent how participants now value their lives and those in it as a result of the September 11th terrorist attacks. When reliability tests were run, Cronbach's alpha was equal to .852, justifying the creation of this new variable.

Table 7: Cronbach Alpha of Appreciation for Life
Reliability Statistics

Cronbach's Alpha	N of Items
.852	6

Correlation between appreciation for life and total immediate reactions

Pearson's r was used to compare the relationship between appreciation for life, which contained statements describing how participants felt September 11th was continuing to impact their life, and the variable total immediate reactions. A significant positive relationship existed between these two variables ($r=.343$, $p<0.01$).

Table 8: Correlation Between Appreciation for Life and Total Immediate Reactions

		Correlations	
		appreciation_for_ life	totalimmreac
appreciation_for_life	Pearson Correlation	1	.343**
	Sig. (2-tailed)		.004
	N	69	69
totalimmreac	Pearson Correlation	.343**	1
	Sig. (2-tailed)	.004	
	N	69	69

** . Correlation is significant at the 0.01 level (2-tailed).

Correlation between direct victims and psychological responses

Pearson's r was used to study the relationship between direct victims and psychological responses (Table 9). Direct victims were defined as those individuals who reported knowing a family member, friend, or both who was injured or killed as a direct result of the terrorist attacks. A significant positive relationship existed between whether or not participants acknowledged knowing someone directly affected by the terrorist attacks and the statement "I feel that future terrorist attacks will be far away from my city and have very little impact on me," ($r=.398$, $p<0.01$). If participants identified knowing either a family member or friend directly impacted by the terrorist attacks, the more likely they were to be fearful that future terrorist attacks would happen and directly affect their lives.

Table 9: Correlation Between Direct Victims and Psychological Responses

		Correlations	
		Direct_victim	Psyrsp05
Direct_victim	Pearson Correlation	1	.389**
	Sig. (2-tailed)		.001
	N	68	68
Psyrsp05	Pearson Correlation	.389**	1
	Sig. (2-tailed)	.001	
	N	68	69

** . Correlation is significant at the 0.01 level (2-tailed).

Conclusion

This research study aimed to investigate the immediate reactions of college age students on 9/11 and their current level of emotional and psychological distress seven years later. The initial goal of the study was to explore the relationship between the students' geographic location on September 11, 2001 and their level of psychological and emotional distress in its aftermath. However, the variable geographic location was not able to be used in the actual results of the study. Therefore, this relationship between geographic location and current distress levels could not be analyzed. The study did provide feedback based on the relationships between other variables indicating whether or not a nationwide tragedy such as 9/11 continues to impact the life choices and behaviors of this college age population.

Past literature suggested that because the terrorist attacks of 9/11 happened at such a critical time in the lives of the current college age students today that the majority of their life choices and behaviors would be affected by the events of this particular day. Research indicated that as this particular population, deemed "Generation 9/11", looked to the future, the threat of terrorism would play a constant role in their thoughts, with the

looming fear that more Americans will die at the hands of terrorist attacks (Bosco & Harvey, 2008, p.4). Regardless of where they were geographically located in relation to the actual sites of the terrorist attacks, it was hypothesized that students participating in this study would indicate still feeling affected by September 11, 2001 due to the nationwide trauma it caused.

The study initially asked participants to indicate how they felt in the immediate aftermath of September 11th. Once mean scores were taken for each of the seven variables belonging to this scale, results indicated that participants did not feel as negatively affected by the attacks as originally anticipated. On average, the majority felt their emotions, behaviors, and feelings were largely unaffected by the terrorist attacks. Although most students reported feeling shocked and/or confused when they first learned of the terrorists and only three out of the sixty-nine participants indicated feeling no reaction to the events at all, these initial feelings did not seem to play a significant role in their lives in the time period following the attacks.

The fact that 9/11 is considered a collective trauma affecting citizens located across the nation is evident from this study (Seery et al., 2008), since most participants indicated having an initial reaction to the terrorist attacks regardless of whether or not they were directly impacted. By comparing the relationship between coping mechanisms and immediate total reactions, knowledge was gained to understand why psychological and emotional distress might have been short-term for this population. Appropriate coping mechanisms utilized immediately after a trauma, such as expressing one's negative feelings openly or using religion and/or spirituality as a source of support, have proven to reduce the risk for developing posttraumatic stress disorder and/or

psychological impairment for victims of nationwide tragedies in the future (DeRoma et al, 2003). The findings from this study were found to be consistent with the results previous literature concerning this area of inquiry. Participants who indicated refusing to accept the reality that 9/11 had actually occurred were more likely to report negative immediate reactions in the wake of the attacks, such as getting angry or upset easily and have difficulty sleeping. This could hinder the ability for these participants to recover from the events of 9/11, with the possibility of arising anxiety, depression, and safety concerns in their future lives. Interestingly, participants who also indicated utilizing coping mechanism previously identified to lower psychological and emotional distress reported also experiencing negative changes in their behaviors and emotional well-being. These participants may be less likely to feel the negative impacts of 9/11 on their future choices, behaviors, and/or emotions because they sought emotional support from others and were open to sharing their negative feelings immediately.

It also appears that the appropriate use of coping mechanisms played a role in the psychological growth that participants have experienced since the time the terrorist attacks took place. It was initially hypothesized that due to the wide range of trauma that 9/11 inflicted upon this nation, the events of this tragedy would still impact the lives of the college age students today who were at such a vulnerable developmental stage when the attacks actually took place. Although this appears to be true, the negative emotions and distress that were hypothesized to exist were not apparent by the research conducted in this study. Appropriate and immediate use of coping after 9/11 seemed to play a vital role in reducing the risk for psychological and emotional distress for current college students in this study. For participants who indicated strongly feeling the negative

impacts of 9/11 in its immediate aftermath, results showed that they reported the highest psychological growth since the time the attacks took place. Although 9/11 continues to impact these students' lives, it appears to have done so in a positive manner, such as helping them to create new priorities in their life and becoming more connected to family members and friends. Additionally, these participants have indicated holding more appreciation for their lives each day by feeling as though they are a valuable asset to others, as well as being more motivated to get things done.

Although September 11th was a horrific tragedy that took place in our nation's history, it seems to have given a new sense of hope and empowerment to the future generation of the United States of America. This study illustrates that in the wake of such nationwide tragedy causing immense amounts of loss, destruction, and hopelessness, positive growth and change can result. Therefore, the resiliency and strengths of this specific age population should never be underestimated. Results from this study indicate that these particular college age students may fall under the title "Generation 9/11;" however, the definition would need to be altered in order to accurately represent the significant positive changes and growth that have impacted these particular population of students and the future direction of their lives.

Limitations

The population for this study was based on a small convenient sample from one college campus in the New England area, where the predominant race is white/Caucasian. There were also a significantly greater number of females than males who completed the survey. Therefore, generalizations to other populations of college age students across the nation concerning low levels of psychological and emotional distress

based on the results from this study must be made carefully, especially in areas where the terrorist attacks actually took place.

Unfortunately, the responses available for the variable geographic location could not be analyzed in a way that they could be used for this study. Students were asked to identify the town and/or city and state where they were geographically located at the time of September 11th. However, this data could not be conceptualized in a way that would explain how geographic location currently impacts lingering emotional and psychological distress among participants in this study. Past researchers were able to define one's level of direct exposure to the terrorist attacks by identifying where they were geographically located at the time of the attacks. By doing so, participants' geographic location was defined by how relatively close or distant an individual was to the actual sites of the terrorist attacks. An individual was thought to have direct exposure to the terrorist attacks if they were located so many miles from one of the three sites where the attacks actually occurred (Liverant et. al, 2004). Due to time constraints and number of participants, utilizing geographic location may not have been practical to implement in this particular study. However, future studies conducted on this topic might consider ways to incorporate this variable geographic location into the study.

Implications for Social Work Practice, Policy and Research

Findings based upon this area of research demonstrate the importance of encouraging expression immediately after a traumatic event, such as 9/11. This knowledge is extremely important for those in the helping profession, as well as educators in schools, college, and universities to remain vigilant of as they work with this particular population and recognize the extent to which terrorism can affect the lives of

their clients and/or students. Additionally, college age students must be supported as they share their emotions and distress. Their concerns should be validated, as nation wide tragedies such as September 11th, can especially shake this population's fundamental values and feelings of personal safety and security, despite the level of direct impact they encountered at the time.

Future studies might consider alternative ways in which the variable, geographic location can be defined in the actual instrument of the survey so that it may be used to find correlations between students' immediate reactions in the aftermath of September 11th and their current understanding of how that day still impacts their lives. This additional data would provide essential knowledge in furthering to explain the difference of reactions and lingering distress from September 11th relative to this population across the nation. This would aide helping professionals as they seek new therapeutic methods and intervention skills to reduce long-term distress, such as PTSD, after a nationwide catastrophe for this particular population.

References

- Bosco, S., & Harvey, D. (2008). Effects of terror attacks on students' anxiety levels and workplace perceptions-five years later. *College Student Journal*, 42(3), 895-905. Retrieved October 9, 2008 from EbscoHost database.
- Carver, C.C. (2009). Brief COPE inventory. Retrieved January 5, 2009 from <http://www.psy.miami.edu>
- DeRoma, V., Saylor, C., Swickert, R., Sinisi, C., Marable, T.B., & Vickery, P. (2003). College students' PTSD symptoms, coping, and perceived benefits following media exposure to 9/11. *Journal of College Student Psychotherapy*, 18(1), 49-64.
- Honos-Webb, L., Sunwolf, Hart, S., & Scalise, J.T. (2006). How to help after national catastrophes: Findings following 9/11. *The Humanist Psychologist*, 34(1), 75-97. Retrieved October 10, 2008 from EbscoHost database.
- Lang, S. (2007). Traumas such as being close to the twin towers on 9/11 could make people's brains more reactive to fear, Cornell study shows. *Cornell Chronicle Online*. Retrieved October 9, 2008 from <http://www.news.cornell.edu/stories/May07/brains9-11.sl.html>.
- Lindsey, B.J., Fugere, M., & Chan, V. (2007). Psychological and emotional reactions of college students to September 11, 2001. *College Student Journal*, 41(3), 1-11. Retrieved October, 13, 2008 from EbscoHost database.
- Liverant, G. I., Hofmann, S.G., & Litz, B. T. (2004). Coping and anxiety in college students after the September 11th terrorist attacks. *Anxiety, Stress, & Coping*, 17(2), 127-139.
- Sattler, D.N. (2002). The September 11th attacks on America: Relationships among psychological distress, posttraumatic growth, and social support in New York. Retrieved January 5, 2009 from <http://www.colorado.edu/hazards/research>.
- Silver, R.C., Holman, A., McIntosh, D., Poulin, M., & Gil-Rav, V. (2002). Nationwide longitudinal study of psychological responses to September 11. *The Journal of the American Medical Association*, 288(10), 1-22. Retrieved October 9, 2008 from EbscoHost database.
- Seo, D., Blari, E., Totabi, M., & Kaldahl, M. (2004). Lifestyle and perceptual changes among college students since September 11. *American Journal of Health Studies*, 19(1), 1-12. Retrieved October 9, 2008, from EbscoHost database.
- Whalley, M.G., & Brewin, C.R. (2007). Mental health following terrorist attacks. *The British Journal of Psychiatry*, 190, 94-96. Retrieved October 9, 2008 from <http://bjp.rcpsych.org>.
- World Trade Center Medical Working Group of New York City. (2008). 2008 Annual report on 9/11 health. Retrieved September 14, 2008 from

www.nyc.gov/html/om/pdf/2008/2008_mwg_annual_report.pdf.

The purpose of my research study is to study the relationship between the geographic location of college age students on 9/11 and how this may or may not affect their current life behaviors and choices, thus leading to any significant emotional and psychological distress. Your participation in this study is strictly voluntary and would be greatly appreciated. This sheet will be separated from the survey instrument for anonymity. Thank you

Signature

Date

I. Demographics:1.) **Gender:**

Male Female

2.) **Age** ____3.) **Religious Affiliation:**

Roman Catholic

Protestant

Jewish

Muslim

No Affiliation

Other (please identify): _____

4.) **Current year in college:**

Freshman Sophomore Junior Senior

5.) **Race:**

African American Asian Hispanic White Other: _____

6.) **Prior to 9/11, did you have a history of anxiety?**

Yes No

and/or a history of depression?

Yes No

7.) **Where were you geographically located on 9/11 (city, town, etc)?:**8.) **How did you initially find out about the terrorist attacks of 9/11?**

Television broadcast

Radio

Word of mouth

Other (Please briefly identify): _____

9.) **Identify your initial reaction(s) after learning of the terrorist attacks:**

Scared

Angry

Confused

Worried

No reaction

Other (Please briefly identify): _____

10.) **Did you have any family member or friend injured or killed in 9/11?**

Family Friend

II. Questionnaire

Please rank the following statements on the likert scale ranging from:

1= strongly disagree

2= disagree

3= neutral

4= agree

5= strongly agree

Please identify your level of emotions/reactions in the immediate aftermath of 9/11

1.) I got upset and/or angry easily.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly
 disagree agree

2.) I felt irritable or on edge.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly
 disagree agree

3.) I got upset when exposed to events that reminded me of the situation.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly
 disagree agree

4.) I felt mixed up or disoriented.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly
 disagree agree

5.) I had difficulty sleeping.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly
 disagree agree

6.) I felt emotionally numb.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly
 disagree agree

7.) I cried more.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly
 disagree agree

III. Coping Mechanisms:

Please identify how you coped immediately after 9/11 based on the following scale:

1 = strongly disagree

2 = disagree

3 = neutral

4 = agree

5 = strongly agree

1. I kept saying to myself "this isn't real."

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree

2. I used alcohol or other drugs to make myself feel better.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree

3. I received emotional support from others.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree

4. I did something to think about it less, such as going to movies or shopping.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree

5. I accepted the reality of the fact that 9/11 had happened.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree

6. I expressed my negative feelings.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree

7. I tried to find comfort in my religion or spiritual beliefs.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree

IV. Quality of Life Areas

Please rank the following statements based on a likert scale ranging from:

1= strongly disagree

2= disagree

3= neutral

4= agree

5= strongly agree

I believe that 9/11 has caused me to.....

1.) Feel closer to one or more family members

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

2.) Feel as though I am more valuable to others

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

3.) Hold more appreciation for each day in my life

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

4.) Feel more confident that I can rely on people in times of trouble

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

5.) Feel that my life has purpose

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

6.) To be more motivated to get things done

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

7.) Feel I have some control over my life

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

8.) Have a personal sense of safety and security

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

9.) Rely more on religious faith and/ or prayer

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

10.) Feel more patriotic

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

11.) Spend more time with loved ones

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

12.) Avoid places with a large number of people

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

13.) Cancel travel plans

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

V.) Posttraumatic Growth and Psychological Responses as a Result of 9/11

Please rank the following statements based on a likert scale ranging from:

1= strongly disagree

2= disagree

3= neutral

4= agree

5= strongly agree

Posttraumatic Growth:

I believe that 9/11 has affected my life in the following ways....

1.) I have new priorities about what is important in my life

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

2.) I have tried to grow as a person as a result of the experience

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

3.) I have discovered that I am stronger than I thought I was

[-----1-----2-----3-----4-----5-----]
 strongly disagree disagree neutral agree strongly agree

Psychosocial Responses:

Because of 9/11, now.....

1.) I have a new respect for people living in my community

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree
 disagree

2.) I am afraid I might lose my life or be seriously injured because of a terrorist attack

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree
 disagree

3.) I am afraid that a family member might lose his/her life or be seriously injured in a terrorist attack

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree
 disagree

4.) I am confident that the government will eliminate terrorist attacks in the U.S.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree
 disagree

5.) I feel that future terrorist attacks will be far away from my city and have very little impact on me.

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree
 disagree

6.) I feel increasingly helpless in the face of what's happening in the world today

[-----1-----2-----3-----4-----5-----]
 strongly disagree neutral agree strongly agree
 disagree

