2-14-2024

The Effects of Spirituality and Social Support on Posttraumatic Growth in BIPOC Communities Following the August 2016 Flooding Event in Baton Rouge, LA

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This is to certify that the doctoral dissertation by

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Walden University
2024

Abstract

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by

Danielle Lorena Lee

MEd, Southeastern Louisiana University, 2013

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Dissertation Submitted in Partial Fulfillment

of the Requirements for the Degree of

Doctor of Philosophy

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Abstract

The Black, Indigenous, and people of color (BIPOC) community of Baton Rouge, Louisiana experienced life-changing events after the August 2016 flooding event in Baton Rouge, Louisiana. Even after experiencing a traumatic event, survivors may display signs of posttraumatic growth (PTG). Previous researchers looked at the impact of social support and religious/spiritual beliefs on PTG, but results have historically been obtained from married, White, and Christian individuals. The purpose of this quantitative study was to explore the influence of religious/spiritual beliefs and social support on PTG. Data were collected from BIPOC participants who reside in East Baton Rouge Parish, Louisiana through an online survey created in SurveyMonkey. PTG provided the conceptual framework for the study. Relevant data were collected through the Multidimensional Scale of Social Support (MSPSS), Brief RCOPE and Posttraumatic Growth Short Form (PTG-SF). The correlation between PTGI-SF and MSPSS was not statistically significant, with a *p*-value of 0. 202. Additionally, correlational findings for PTGI-SF and Brief RCOPE were not statistically significant, as the *p*-value was 0.213. However, a correlation analysis showed individuals with higher levels of PTG tended to have higher levels of perceived social support and religious coping strategies. This study contributes to social change by highlighting how social support systems and religious coping assists survivors following flooding events. It is imperative for further research to take place in order to create initiatives for communities routinely affected by natural disasters in the future.

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Dedication

I dedicate this dissertation to all the survivors of the August 2016 flood. I am you, you are me. We have lived through some of the toughest times and continue to be resilient. Lastly, I dedicate this study to the BIPOC community. May we continue to fight for less barriers and more opportunities to thrive in a world that overlooks us.

Acknowledgments

This journey would have been possible without the assistance of my committee members, Dr. Victoria Sepulveda and Dr. Sadohl Jones. I am thankful and honored to have them take this journey with me. Their guidance, wisdom, and encouragement was priceless during this time.

I would like to acknowledge all participants that took time out of their day to take my study. I know reliving those time following the flood was difficult and you still made it a point to complete the survey. With your help, we can make sure others have a better experience in the future.

Lastly, I want to acknowledge my family. My rock and consist in my life that keep my grounded during the darkest times in my life. My heart and soul, my mother, Robin Lee, that you for your love and always being there for me, even when I was difficult and at my lowest. To my big sister, Cassidy Lee, for always being my writing support and listening ear. To my grandmother, Lorena Crook, and aunt, Tandra Crook, for the positive words and support no matter what was going on in their lives. To my fur babies, Lily and Keke, thank you for being my unofficial therapy dogs while we lived through a flooding event or two and for witnessing many breakdowns and giving me kisses to cheer me up. To the newest addition to our lives, my nephew, Xavier Andrew Lee Johnson, I am so proud to by your aunt and godmother. Thanks for be that additional push for me getting through this process.

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Chapter 1: Introduction to the Study

Introduction

Flooding has become one of the world's most prevalent and destructive natural disasters (Dai et al., 2017; Dispenza et al., 2018; Jermacane et al., 2018). Dar et al. (2018) identified how flooding accounts for more than 48.2% of reported disasters in 2013. Due to climate change and growth in structural developments, 1 in 75 people have experienced exposure to flooding (Jermacane et al., 2018). Survivors often experience acute traumatic stress, anxiety, and depressive disorders following exposure to natural disasters such as flooding from hurricanes and other occurrences (Dispensza et al., 2019). The capability of flooding to disrupt all aspects of life, including daily lives, infrastructure, livestock, and businesses, and its increase in frequency necessitates that local officials and communities prepare their citizens for floods to decrease possible negative traumatic responses. Communities must clean, rebuild, or refurbish properties affected by floodwater (Jermacane et al., 2018). While it is essential to focus on the physical damage, the psychological damage can come at a cost to the community (Mesidor & Sly, 2019). It is essential to bring awareness to possible challenges survivors may experience following a flood and how communities and local government can assist survivors in coping after the disaster (Mesidor & Sly, 2019).

This chapter will include a review of the background of the proposed study, the problem statement, the purpose of the proposed study, the research question, and the hypotheses. Also, the conceptual framework, nature of the study, and operational definitions will be discussed. Lastly, assumptions, limitations, scope, delimitations, and significance will be covered in this chapter.

Background

Communities could experience additional stressors related to the frequency of flooding. Receiving social support after a disaster can mitigate post-disaster depressive symptoms, posttraumatic stress disorder (PTSD), and prolonged grief disorder (Mao & Agyapong, 2021). Some communities are unprepared to take care of the mental health problems that can come after a traumatic event. Residents of Louisiana also may face many challenges with living in a state that faces numerous natural disasters every year (Allen & Scott, 2018; Allen & Wright, 2018). Unfortunately, some of these natural disaster challenges cannot be prevented due to the climate and geographical nature of the state.

Following a flooding event, survivors can experience emotional distress. Emotional distress can affect people differently, meaning there is no one way a person can express their stress. Recognizing when the distress is difficult to manage alone is essential. Social support is a known protective factor to assist in overcoming negative mental health impacts following a natural disaster (McGuire et al., 2018). Literature shows that pre-disaster social support can decrease adverse psychological effects following the disaster (Mao & Agyapong, 2021). The psychosocial impacts of significant flooding can extend for periods (Stanke et al., 2012). Further, mental health outcomes get worse the longer natural disaster recovery takes, such as in the aftermath of Hurricane Katrina in 2005, where some homes were still damaged at present due to slow recovery efforts (Hopkins & Russell, 2020). High rates of depression, anxiety, and PTSD can be found in survivors of the 2016 flood months to years following the event (Keegan et al., 2018).

Federal Emergency Management Agency (FEMA) is a federal disaster program with funds dedicated after the disaster (Lucie, 2016). FEMA could benefit from preparedness and mitigation rather than the current response and recovery model (Lucie, 2016). In three decades, FEMA has only given $867 million through its Crisis Counseling Assistance and Training Program (CCP) (Hopkins & Russell, 2020). Funds have not been adequately distributed in minority and low-income communities (Hopkins & Russell, 2020). After Hurricane Harvey in 2017, the Harris Center for Mental Health and Intellectual Development Disabilities (IDD) reported that CCP only provided counseling and no other forms of support (Hopkins & Russell, 2020). It is common for parts of grants to be unspent towards the end of the program. For example, at the end of the Hurricane Harvey counseling program, 40% of the grant was unspent, and many positions needed to be filled when the contract was completed (Hopkins & Russell, 2020). The agency led educational sessions to motivate community members to seek additional help from mental health organizations, religious affiliations, friends, and family (Hopkins & Russell, 2020). Representatives of the agency understood the community needed more than counseling to overcome the hardships of the hurricane.

The community of Baton Rouge has a long history of racial tensions. The invisible racial line dividing South Baton Rouge, which has a majority white population, and North Baton Rouge, which has a majority Black population, brought a more comprehensive look at the disparities between the communities following the 2016 flood (Larkin, 2016). Many communities of persons who identify as Black, Indigenous, and people of color (BIPOC) are still recovering from the 2016 flood due to a lack of flood insurance and financial resources (Larkin, 2016; Turner, 2021).

Communities within North Baton Rouge experienced mental health challenges following the 2016 flood. Individuals within the community with mental health challenges had trouble finding mental health care due to the shortage of mental health professionals due to the closure of the Earl K. Long Hospital in 2013 (Keegan et al., 2018). Earl K. Long Hospital had previously served people who lived in poverty or did not have health insurance (Keegan et al., 2018). Before Earl K. Long Hospital was closed, there was limited capacity to deliver behavioral health services (Keegan et al., 2018). The shortage of mental health care created an issue with access to care and left many without mental health services following the 2016 flood. Louisiana's leadership could benefit from encouraging the message of how social support and religious/spiritual beliefs are protective factors for survivors and can assist in reducing traumatic responses (Mesidor & Sly, 2019).

Problem Statement

Socially vulnerable populations are often overlooked after a disaster. People of color in the United States are found to be more vulnerable to weather-related events, environmental circumstances, and labor market dislocations (Patnaik et al., 2020). Federal aid can be dispersed differently between communities. Some individuals can experience an increase or decrease in family and community wealth following a natural disaster (Turner, 2022). White communities can see an increase in wealth after a disaster. In contrast, minority communities can see a decrease in wealth due to disinvestment and discriminatory practices and policies that manifest into inequalities seen within the BIPOC community (Patnaik et al., 2020). Individuals with wealth can experience access to new resources, opportunities, and payouts from insurance policies (Gothan, 2014). Socially vulnerable populations experience financial

difficulties such as losing their job, having to pay higher amounts in rent due to limited housing opinion caused by the natural disaster, and limited savings to take care of after-disaster situations (Elliott & Pais, 2006; Elliott & Howell, 2017; Howell & Elliot, 2019; Vigdor, 2008). It is important to understand that individuals with little to no income have increased vulnerability and decreased ability to cope with daily stressors following a disaster (Turner, 2022). Similarly, following Hurricane Katrina, survivors who resided in the Lower Ninth Ward experienced the highest number of deaths and had three times the national average of poverty for a third of residents (Turner, 2022). Climate-related issues impact People of color the most (Turner, 2022).

Additionally, minorities and low-income populations are more likely to live in industrial areas that are at risk for environmental issues from natural disasters (Patnaik et al., 2020). Communities of color need effective policies and programs to improve the current condition (Patnaik et al., 2020). While some organizations are working towards environmental and climate justice for minorities, there is a call for more voices to bring awareness to the climate crisis and constraints with the communities of color (Patnaik et al., 2020). I lend my voice to bring awareness to the socially vulnerable in Baton Rouge, Louisiana. It is imperative to identify ways to ensure that this community (along with others similar) is properly cared for after a natural disaster. This dissertation study contributes to the counseling profession by providing greater insight into the impact of natural disasters on clients and counseling students. Each survivor's experience and response to the recovery period is unique, and as counseling professionals, we should be able to evaluate if they are experiencing any negative mental health symptoms. This study will assist counselors in implementing

effective treatment to treat survivors. Additionally, counselor education programs should consider adding more crisis training for individuals experiencing a natural disaster. Lastly, this research will support counselor educators in providing more empathy to students currently experiencing natural hazards and provide additional support through this major adjustment time.

Purpose of the Study

This quantitative study explored how social support (independent variable; IV) and religious/spiritual beliefs (IV) affect post-traumatic growth (dependent variable, DV) in BIPOC survivors of the August 2016 flood in Baton Rouge, Louisiana. The study utilized survey methods to examine posttraumatic growth (PTG), social support, and religious/spiritual beliefs in BIPOC survivors. The findings of this study may help others understand the roles of social support and religious/spiritual beliefs in moderate traumatic experiences and hardships. Previous research conducted by Dispenza et al. (2019) stated that limitations in their study included that most participants were married, white Christian populations affected by the 2016 flood. As such, results from the study may not be generalized to other racial, ethnic, religious, and social groups (Dispenza et al., 2019). Additionally, future research should broaden and validate the experiences of other marginalized and diverse populations.

Research Question and Hypotheses

Research Question

RQ1- Quantitative: To what extent do religious/spiritual beliefs (as measured by the Brief RCOPE) and social support systems (as measured by the Multidimensional Scale of Perceived Social Support (MSPSS) have on posttraumatic growth (as measured by Posttraumatic Growth Inventory Short Form (PTGI-SF)?

Hypotheses

H_0: Flood survivors who have religious/spiritual beliefs and social support systems identify as having no posttraumatic growth as evidenced by the Posttraumatic Growth Inventory Short Form (PTGI-SF),

H_1: Flood survivors who have stronger religious/spiritual beliefs and social support systems identify as having increased posttraumatic growth as evidenced by Posttraumatic Growth Inventory Short Form (PTGI-SF).

Conceptual Framework for the Study

The conceptual framework for this study is the concept of posttraumatic growth (PTG). Trauma can change all aspects of life. Suffering can be transformational, and positive things can come from it. PTG occurs when a person undergoes self-improvement after a life-challenging experience (Chowdhury, 2019). Sometimes, PTG and resilience are interchangeable, but they are different. Resilience is a personal quality that allows individuals to overcome stress and sorrow (Chowdhury, 2019). At the same time, PTG is an enlightened mental state after exposure to trauma (Chowdhury, 2019). PTG is positively and negatively linked to those with resilience and PTSD (Levine et al., 2008; Nishi et al., 2010).

PTG has been studied in multiple populations and captures a broad range of trauma and experiences (Tsai et al., 2017). For example, positive growth has been seen in the aftermath of natural disasters (Cieslak et al., 2009; Hatstad et al., 2011; Mesidor & Sly, 2019). Those with PTG experience changes in the following domains: appreciation of life, improvement in interpersonal relationships, increased personal strength, changes to priorities, and a more prosperous spiritual life (Tedeschi & Calhoun, 2004).

Nature of the Study

The quantitative survey for this study has been designed to analyze the potential relationships of the variables, social support, religious/spiritual beliefs, and PTG of this study. The study is non-experimental and observed variables without manipulation. The independent variables in this study are social support and religious/spiritual beliefs, whereas the dependent variable is the participants' level of PTG. The validated instruments, *the Multidimensional Scale of Perceived Social Support,* the *Brief RCOPE, and the Posttraumatic Growth Inventory Short Form,* will assess PTG, religious/spiritual beliefs, and social support following the August 2016 flood in Baton Rouge, Louisiana. The sample came from various religious and spiritual organizations, community health clinics, local communities, and four-year colleges. Social media outlets such as Facebook, Twitter, and LinkedIn were utilized to recruit participants. The data for this study were collected through Survey Monkey and were analyzed through IBM Statistical Package for the Social Sciences (SPSS) Version 27. For this study, a multiple regression analysis was conducted on the potential relationship between PTG, religious/spiritual beliefs, and social support.

Definitions

BIPOC: BIPOC stands for Black, Indigenous, and People of Color. This descriptive term is used to acknowledge that people of color face systematic racism, oppression, and invalidation that impact their daily lives (Davidson, 2022). In addition, the term *BIPOC* aims to highlight that not all people of color have the same experience regarding systematic oppression (Davidson, 2022).

Posttraumatic growth: Posttraumatic growth is defined as a positive psychological change in the wake of trauma or a tough life challenge (Tedeschi & Calhoun, 2004).

Posttraumatic stress disorder: Posttraumatic stress disorder is a state of traumatic experience where survivors experience mental numbness, increased alertness, and problems with cognition and memory (American Psychiatric Association, 2022; Jin et al., 2018)

Religious/Spiritual beliefs: Religious/spiritual beliefs combine religion and spirituality. The term *religion* is defined as finding significant meaning in the context of an established institution that assists in delivering spirituality (Pargament et al., 2013). Spirituality is one's sense of meaning in life and relationship with God, gods, or other deities and combines religious and existential well-being (Ellison, 1983).

Social Support: Social support is perceived support from friends, family, or organizations during an adverse time (Kaniasty, 2020).

Traumatic Responses: Individuals who are survivors of traumatic experiences have psychological effects such as PTSD, anxiety, and depression (Cénat & Derivois, 2014; Mesidor & Sly, 2019). Some survivors experience sleep disturbances and maladaptive coping skills (Dispenza et al., 2018). For this study, those psychological effects will be called *traumatic responses*.

Assumptions

For this study, it was assumed the participants met the criteria needed to participate in this study. It was also assumed the participants responded honestly to survey questions based on their experiences during the August 2016 flood. In addition, I assumed I would have enough diverse participants who disclosed having

religious and spiritual beliefs to participate in the study. I took measures to ensure participants of various religious/spiritual beliefs received access to the study by emailing local faith-based organizations such as Bethany Church of Baton Rouge, Al-Hablulmateen Islamic Center Inc., Unified Jewish Congregation of Baton Rouge, Tam Bao Meditation Center, Rose Hill Missionary Baptist, and Datta Temple. Lastly, it was assumed that survivors relied on social support and religious/spiritual coping following the traumatic events of the 2016 flood. There may have been other factors that assisted these persons in overcoming hardships during this time, which are unknown by the author. This study did not identify other factors that assisted participants in coping with the flooding event.

Scope and Delimitations

The purpose of this study was to examine social support and religious/spiritual beliefs on PTG. This study purposefully excluded white participants due to the underrepresentation of the BIPOC participants in other studies regarding their experiences of the August 2016 flood. Therefore, the study results are limited to the BIPOC community of East Baton Rouge Parish survivors of the August 2016 flooding event to ensure minorities that were not represented in previous studies such as Dispenza et al. (2018). Other cities in Louisiana and other southern states' BIPOC communities may find similarities with the results of this study; thus, the results of this study may be generalizable to other communities that espouse a high BIPOC population.

Limitations

The present study had some limitations. Other parishes in the state of Louisiana were affected by the August 2016 flood but are not included in this study. I

focused on East Baton Rouge Parish due to my accessibility to the churches and organizations that will be reached to participate in this study. Another limitation is that I did not analyze previous traumatic events, such as hurricanes, tornados, and other flooding events, before or following the August 2016 flood, which impacted East Baton Rouge, Louisiana.

Significance

Flood survivors are at their most vulnerable following floods. No matter the race, ethnicity, age, gender, or disability, people need extra care and help during these challenging times. Flood survivors can experience extreme emotional disturbances following natural disasters (Dar et al., 2017; Dispenza et al., 2018). These emotional disturbances can affect all their lives (Dispenza et al., 2018). Instead of returning to their normal daily functions, they may struggle to complete simple everyday tasks. Often following natural disasters, communities and agencies quickly offer survivors financial assistance. Following the 2016 flood, Louisiana had financial assistance for displaced residents for a long time. FEMA, Small Business Administration (SBA), Restore Louisiana, Shelter at Home, and others provided financial assistance to help residents return to their homes or businesses (Flood Recovery Resources, n.d.). While financial assistance is greatly needed following a flood, it is imperative to prioritize survivors' mental and emotional wellness across different systems. In addition, the state of Louisiana has a website dedicated to emergency preparedness and response. The emergency preparedness guide includes vital resources on preparing before a disaster, what to do during and after the storm, emergency shelter, and recovery assistance (GOHEP, n.d.). Throughout the document, there is no mention of how to decrease mental health distress following a disaster. The results of this study could be

used to create new initiatives or improve the current systems in place with the state of Louisiana to promote PTG amongst flood survivors, such as community support systems.

Summary

This quantitative study examined the potential associations between flood exposure, PTSD, social support, religious/spiritual beliefs, and PTG. This chapter contained the introduction and background of the study, followed by the problem statement, purpose, significance, and research question. The chapter also contained the conceptual framework, operational definitions, assumptions, and scope of the study. This chapter included the quantitative study's delimitations, limitations, and weaknesses. Chapter 2 of the study will review the literature regarding the August 2016 flood, the BIPOC community of Baton Rouge, social support, religious/spiritual beliefs, and PTG.

Chapter 2: Literature Review

Introduction

This literature review aims to summarize relevant material and information and present a conceptual framework to give understanding and support for this dissertation proposal. This chapter consists of a literature review relevant to Baton Rouge's 2016 flood and systemic issues within the BIPOC community. Additionally, I will review social support and religious/spiritual beliefs in terms of how they impact trauma. I will also introduce the conceptualization of post-traumatic growth (PTG). Lastly, I will explore how traumatic events can positively change survivors' lives following the flood.

Literature Search Strategy

Several types of search engines were utilized to ensure that this chapter had a robust literature review. Several references, books, and websites were reviewed to prepare for this chapter. Examining relevant articles and data assisted in developing a comprehensive review of available literature. A search was performed using various electronic databases, including ProQuest, SAGE, Thoreau, and Wiley Online Library. The Google Scholar search engine was used as well. Keywords used included *African Americans, Baton Rouge flood, BIPOC, flooding event, Hurricane Katrina, hurricane, loss, mental health symptoms, Minority, natural disasters, Post Traumatic Growth (PTG), Post-Traumatic Stress Disorder (PTSD), Racism, religion, resilience, social support, spirituality, survivors of disasters,* and *trauma*. The specific journals utilized for this literature review were *AIDS Care, American Journal of Orthopsychiatry American Journal of Public Health*, *Applied Psychology: An International Review*, *Child Development, Community Development, Current Opinion*

in Psychology, *Current Psychology*, *Hydrology and Earth System Sciences*, *International Journal of Aging & Human Development*, *International Journal of Environmental Research and Public Health*, *Journal for the Theory of Social Behavior*, *Journal of Clinical Psychology in Medical Settings*, *Journal of Health Psychology*, *Journal of Hydrometeorology*, *Journal of Loss and Trauma*, *Journal of Marriage and Family*, *Journal of Palliative Medicine*, *Journal of Religion & Health*, *Journal of Social and Personal Relationships*, *Journal of Social Issues*, *Journal of Trauma & Dissociation*, *Journal of Traumatic Stress*, *Mental Health, Religion & Culture*, *Milbank Quarterly*, *Perspectives in Personality*, *Psychology of Women Quarterly*, *Psychological Association*, *Psychological Trauma: Theory, Research, Practice, and Policy*, *Religions*, *Review of General Psychology*, *Social Psychiatry and Psychiatric Epidemiology*, *Social Science & Medicine*, *Text & Performance, Quarterly*, *Traumatology*, and *Violence Against Women*. The websites utilized include The Advocate, Affilia, APA, The Atlantic, AP News, Choosing Therapy, CNN, Louisiana.gov, Milbank Quarterly, Nation, New York Times, Positive Psychology, Property Casualty 360, and *Salem Press Encyclopedia*. The literature search provided rich data to support the justification for this study.

Literature Review

Baton Rouge August 2016 Flood

Complex Trauma of the Summer of 2016

The summer of 2016 alone caused intensive trauma and division in Baton Rouge. On July 5, 2016, a 37-year-old Black man, Alton Sterling, died from gunfire from a Baton Rouge police officer (Grover, 2020; Hamzehee, 2021). The father of five made a living selling CDs to support his family in front of a convenience store in

north Baton Rouge (Deslatte, 2016). Someone called 911, claiming Sterling threatened them with a gun (Grover, 2020). The man left the scene before police officers arrived on the scene. Bystanders caught footage of officers' interaction with Sterling (Grover, 2020; Hamzehee, 2021). The video showed two officers wrestling Sterling to the ground forcefully. While Sterling was pinned on the ground, one of the officers shouted, "He has got a gun," and the officer proceeded to pull out his taser gun, tased then fired his weapon six times, hitting Sterling in his back and chest (Grover, 2020; Meyerson, 2017). The store owner where Sterling's killing happened stated that he had never been a problem at the store and considered Sterling a friend (Meyerson, 2017). Videos of Sterling's death made their way to the internet. Sterling's killing prompted public outcry because the incident was deemed a case of police brutality.

Black Lives Matter (BLM) led a movement of protests throughout Baton Rouge in response to the death of Alton Sterling. BLM is a social justice movement that aims to raise awareness of police brutality, founded in 2013. Members of the local NAACP, Sterling's family, BLM, and local Black residents protested and demanded justice for Sterling's death. Most Black residents in the northern part of Baton Rouge were among the thousands of protestors arrested. Protestors reported protesting peacefully before police arrived in riot gear and aggressively arrested individuals. Baton Rouge residents wanted to exercise their First Amendment rights but were not allowed to. Videos showed law enforcement in riot gear throwing protestors to the ground and arresting them. Many individuals filed lawsuits against the city of Baton Rouge, Baton Rouge police, and the East Baton Rouge Sheriff's Department for their treatment during their protest for fundamental civil rights.

However, most white residents countered with All Lives Matter and Blue Lives Matter. Blue Lives Matter is a countermovement to BLM that emerged in response to opposing views towards law enforcement and support for the police (Meyerson, 2017; Walter, 2021).

On July 17, 2016, Gavin Long, a military veteran armed with several guns, attacked a small shopping center in Baton Rouge, killing three law enforcement officers, Brad Garafola, Montrell Jackson, and Matthew Gerald, and seriously injuring Nicholas Tuiller and others (Grover, 2020; Hamzehee, 2021). Tuiller died from his injuries on May 5, 2022 (Wilkins, 2022). The attack occurred ten days after a similar ambush in Dallas, where five officers died and seven were injured, but the two shootings were unrelated (Hamzehee, 2021). Long was killed by police, and a suicide note on him described his belief that his actions were a "necessary evil" to reform the system and eliminate bad police officers (Grover, 2010). Jackson, one of the officers killed, was a Black man, causing the city to become divided on which side to support (Grover, 2020). A month later, Baton Rouge faced yet another tragedy.

Substantial Rainfall in the 2016 Flood

Louisiana is known as one of the wettest states in the United States (Faiers et al., 1994). It is very common for the state to experience a few hurricanes each year. For example, Hurricane Katrina in 2005 was one of the most known and costly hurricanes to hit the State of Louisiana (Brown et al., 2020).

On August 3, 2016, a storm system developed over Florida that was threatening to form into a tropical depression. It never did, but the low-pressure area had much moisture. The storm system went from Florida through the Gulf of Mexico and ended up over the Baton Rouge area, where it just would not move and ultimately

dissipated in Texas almost two weeks later (Brown et al., 2020). The no-named storm was initially just a meteorologist warning that heavy rain was coming to south central Louisiana overnight, possibly reaching 6 to 10 inches. However, Watson, Louisiana, the hardest hit area of Livingston Parish, experienced 31.39 inches of record rainfall between 6:00 am and 9:00 pm on Tuesday, August 9, 2016 (Brown et al., 2020). This massive amount of rainfall represented over 6.9 trillion gallons of rainwater, which equals enough to fill more than 10.4 million Olympic-sized pools of water (Yan, 2016). Rainfall was at its highest in Baton Rouge and surrounding areas, with more than 19 inches of rain during this same 15-hour period (van der Wiel et al., 2017; Yan, 2016). Rivers like the Amite and Comite reached record flood levels (Allen & Wright, 2018). The Amite River at Port Vincent broke the previous record level of 14.6 feet for three consecutive days. After cresting at 17.45 feet early on Monday, the river stood at 14.9 feet. Flash and river flooding produced additional backwater flooding as the water moved downstream (van der Wiel et al., 2017). The flood of August 2016 came to be known as the "Great Flood" or "1,000-year flood" and profoundly changed the lives of Louisiana residents.

Community of Baton Rouge Following the Flood

More than 92,00 households felt the impact of the flood (Mitchell & Hardy, 2017). Survivors still recount their rescue stories. One survivor remembers walking from work to her home to survey the damage. She reported that while walking, she saw stranded 18-wheelers and continued walking until she fell into a six-foot floodwater pit (Allen & Wright, 2018). After that experience, she knew her home sustained major damage. There was no time for survivors to save precious items. Another survivor recounted waking up to neighbors lining their homes with sandbags

and packing items to evacuate before the waters reached their homes (Allen & Wright, 2018). Survivors reported putting items of high value up on high ground so they would not get damaged (Allen & Wright, 2018). The flooding happened so quickly that many survivors could not leave their homes in time. Almost 30,000 people were rescued (van der Wiel et al., 2017). Survivors were unsure how they were going to escape the fast-rushing water. A group of local citizens took their private boats. It started rescuing people from their homes, forming an unofficial volunteer fleet of rescuers known as the Cajun Navy (Allen & Wright, 2018). They rescued people and pets and took them to safer ground (Allen & Wright, 2018). Even with all the rescue efforts, 13 people lost their lives.

The economic impact on the state was devastating. Over $20 billion in damage occurred across Louisiana (Allen & Scott, 2018; Keegan et al., 2018). The flood destroyed 110,000 homes during the weekend (Keegan et al., 2018). At least 6,000 businesses and 278,000 residents were rendered unemployed due to the flood (Keegan et al., 2018). The agricultural community also suffered profoundly after the floods. For example, farmers reported $367 million in lost crops, livestock, and equipment (Advocate Staff Report, 2016). Rice and soybeans were among the hardest-hit crops after the flood (Guidry, 2016).

Only one in eight residents in Baton Rouge homeowners had flood insurance during the August 2016 flood (Mitchell & Hardy, 2017). Many areas in Baton Rouge that flooded were low-risk flood areas and did not require flood insurance (Mitchell & Hardy, 2017). Governor Edwards did receive some initial pushback from Congress when seeking aid for the residents of Louisiana. He requested $2.8 billion in aid to assist homeowners and businesses that did not have flood insurance (Advocate Editor,

2016). Most individuals without flood insurance could get aid from the Federal Emergency Management Agency (FEMA) and U.S. Small Business Administration (SBA) loans. Individuals who took the SBA loans had to repay the loan over 30years.

Across Louisiana, 50 schools suffered significant damage from the 2016 flood (Lussier, 2018c). Immediately following the flood, students and staff were out of school for at least one month as the damage was surveyed. Many schools rebuilt merged campuses or closed down following the flood (Lussier, 2018c). Baker School System had to wait 18 months before the $14.5 million from USDA was approved to rebuild Baker High (Lussier, 2018c). FEMA determined that the damage at Baker High School was so severe that it could not be repaired, as it needed total replacement (Lussier, 2018c). The school now needs to be elevated as a safeguard against the risk of future flooding. Students from Baker High School still have not returned to their campus as of this date. Some schools in the East Baton Rouge school system struggled to provide students with adequate learning spaces. Glen Oaks High School spent almost $1.1 million to purchase t-buildings (Lussier, 2018b). Repairs to the school began in 2017 and lasted until 2020. East Baton Rouge school system had to replace approximately 600 buses following the flood (Lussier, 2018a). The school system, in total, received $5.6 million from FEMA to repurchase and repair buses damaged during the flood (Luisser, 2018a).

Lives of Survivors in the Aftermath

On the night of the flood, 10,600 people slept in shelters (van der Wiel et al., 2017). Celtic Studios housed more than 2,000 survivors following the flood (Allen & Wright, 2018). Survivors struggled to have adequate supplies due to the residents needing assistance. Residents displaced due to the flood lived in shelters provided by

the American Red Cross, FEMA, government agencies, and other local agencies (van der Wiel et al., 2017). LSU housed special needs individuals, and Lamar Dixon Expo Center housed many pets and livestock (Allen & Wright, 2018). Many survivors resorted to living with friends and loved ones after their homes were destroyed. FEMA did pay for survivors to live in hotels temporarily as they worked on looking for more permanent housing. FEMA assisted in getting survivors funds to live in short-term leases at apartments. The state had a program called "Shelter at Home" to assist people in getting into their homes quickly by installing temporary structures and appliances for a bathroom and kitchen (Mitchell & Hardy, 2017). Some flood survivors moved into FEMA mobile homes to return to normalcy. Those who returned to their neighborhoods described their area in the FEMA trailer as a ghost town because so many had not returned (Mitchell & Hardy, 2017). Many neighborhoods had daily reminders of the flood due to tons of debris left in destroyed homes (Allen & Wright, 2018). There was no designated landfill for the debris, and it took months to pick it up.

Survivors disclosed that their neighborhoods have not returned to normalcy years after the flood. Many neighbors felt discouraged and did not want to rebuild. Some homes were put up for sale, left gutted, or left unoccupied (Mitchell & Hardy, 2017). Some could not afford repairs, were forced to declare bankruptcy, defaulted on their mortgage, and were left homeless (Allen & Wright, 2018). In one neighborhood, the Baton Rouge city parish determined the damage was too substantial and demolished several homes (Mitchell & Hardy, 2017). One survivor recounts running out of money while rebuilding his home and attempting to gut and repair her home herself (Allen & Wright, 2018). A survivor received funds from her employer and

FEMA but had to wait to see if she qualified for grant funds from Restore Louisiana (Mitchell & Hardy, 2017). Some who received money from their flood claim had their mortgage company dispute their paperwork with their contractor (Mitchell & Hardy, 2017). Countless survivors can recall contractors taking their money and never hearing from them again. Many laws were followed due to contractor fraud. Restore Louisiana assisted residents struggling to repair their homes following the 2016 flood. Some residents struggled to get funding from Restore Louisiana due to a duplication of funds that Congress later overturned the bill (Ballard, 2018). The duplication dilemma arose for residents who were instructed to take out the SBA loan to rebuild following applying for FEMA. Almost 6,000 households were negatively affected due to the duplication issue (Ballard, 2018).

While resilience was high after the flood, many survivors struggled with their mental health. Some of the common mental health issues were depression, posttraumatic stress disorder (PTSD), stress and trauma-related disorders, substance abuse, and anxiety (Keegan et al., 2018; Phillippi et al., 2019). The Crisis Intervention Center reported an increase in the utilization of crisis calls following the historic flood (Hardy, 2017). Medicaid utilization increased following the flood (Keegan et al., 2018; Phillippi et al., 2019). Survivors sought mental health treatment after the flood from their primary care provider (PCP) and not a behavioral health professional (Keegan et al., 2018; Phillippi et al., 2019). A doctor at Baton Rouge General Medical Center reported physical health symptoms of insomnia and chest pain. The underlying problem might be depression or anxiety (Hardy, 2017). An individual's body response to trauma can be an increase in heart rate and release of stress hormones (Hardy, 2017). Indications suggest that many survivors are unsure how much the flood

impacted their physical and mental health. A year after the flood, Louisiana Spirit conducted 22,401 individual counseling sessions (Hardy, 2017). The suicide rate for Louisiana was higher than the national average. According to statistics, someone took their own life at least every 12 hours (Hardy, 2017). Survivors with good insight can recall having an increase in anxiety and depression during the rebuilding period (Allen & Wright, 2018).

BIPOC Community in Baton Rouge

Louisiana is still grappling with the lasting impacts of slavery, racism, and Jim Crow laws, which persist even covertly, as explained by Allen and Scott (2017). Racism manifests in various aspects of the city, including infrastructure, housing, education, social interactions, and income disparities, as noted by Grover (2020). According to Grover, in 2016 and 2017, the local community of Baton Rouge was 55% Black and 36% white, with small proportions of Hispanic and Asian residents. The city is segregated by an invisible line that separates the south, which is predominantly white, from the north, which is primarily Black (Deslatte, 2016; Grover, 2020). The southern part of Baton Rouge, economically stable due to the success of businesses such as the Celtic Media Centre film studio, newly built hotels, IBM, and EA Games, enjoys financial prosperity (Grover, 2020). However, the northern part of Baton Rouge lacks commercial development and financial success, as Brown (2016) and Grover reported. Grover further noted that Black residents in the northern part of Baton Rouge are more than six times more likely to experience poverty and have a 12-year shorter lifespan than their white counterparts in the city.

Baton Rouge has experienced various closures, including the closure of a state hospital and high schools to which white residents had previously relocated to live in

southern suburbs, as Deslatte (2016) reported. With the closure of Earl K. Long Hospital in 2013, North Baton Rouge residents have had reduced access to nearby emergency healthcare facilities, particularly those without adequate healthcare, as noted by Grover (2020). The hospital served insured and uninsured residents, providing healthcare to all community members (Grover, 2020). In 2013, white residents attempted to establish the city of St. George to segregate themselves from the rest of the city, as Deslatte and Grover reported. If St. George were to be established, its population would be 70% white and 23% Black, as Brown (2016) noted. The wealthy new city would cause more than 30% of the parish general fund to disappear, and Baton Rouge would suffer financially, as Brown reported. The racial divide in the city is also apparent at the educational level, with Louisiana State University (LSU), which has most white students, located in south Baton Rouge (Deslatte, 2016).

Meanwhile, one of the nation's Historically Black Colleges and Universities (HBCUs), Southern University, is in North Baton Rouge (Deslatte, 2016). African Americans have fewer educational opportunities and lower academic performance than their white counterparts in the community, as reported by Grover (2020). Even Black college graduates have difficulty finding employment in the state and often leave for better opportunities (Deslatte, 2016). Grover reported that Blacks are three times more likely to experience poverty than Whites, and even in the East Baton Rouge Parish jail, three out of four inmates are Black.

In the case of law enforcement, two out of three officers are white. The department struggles to diversify (Fausset et al., 2016). The Black community deeply distrusts the police (Deslatte, 2016). The city has a 30-year decree mandating

opportunities for more Black officers to join the force (Grover, 2020). Baton Rouge has one of the most racially disparate police forces in the country (Berube & Holmes, 2016). Following Hurricane Katrina, thousands of evacuees came to Baton Rouge and were profiled by various law enforcement agencies (Deslatte, 2016). Black individuals accused officers of harassment, unnecessary force, and illegal searches (Deslatte, 2016). In jury cases, few Blacks make it to the panel. If a Black person is selected, one or two may make it to the jury, which does not accurately depict the racial makeup of Baton Rouge residents (Grover, 2020). The disparities are evident and continue to grow. Racial tension seemed to reach a peak during the summer of 2016.

BIPOC Community Following the 2016 Flood

While the flood did not target individuals based on race, many BIPOC members were disproportionately impacted. Some residents were still homeless over a year after the flood (Allen & Scott, 2017). Many residents residing in Black neighborhoods were hardest hit by the flood (Larkin, 2016). Many white areas are on top of a bluff, which causes the area not to flood and anyone on the other side of the bluff to take the brunt of the flood waters (Larkin, 2016). Like Hurricane Katrina, where parts of the French Quarter were untouched, areas surrounding the French Quarter, like the seventh and ninth wards, were heavily hit (Larkin, 2016). Many members of the BIPOC community did not have flood insurance to cover the damage from the flood. FEMA recognized that disadvantaged areas needed accessibility to flood insurance and resources (Turner, 2021). As a result, many minorities had trouble building their homes following the flood. Since flood insurance was not

required for many Baton Rouge areas, residents depended on government assistance like FEMA to restore their homes.

Other Complexes within the BIPOC Community

Members of the BIPOC community have experienced numerous traumatizing events throughout their lives. Many minorities have shared experiences of refugees, concentration camps, victimization, oppression, and colonization (Grover, 2020). From the past experiences of trauma, descendants of the BIPOC community experienced PTSD, memory loss, survivor's guilt, substance abuse, nightmares, and repressed grief (Leary, 2017). The BIPOC community experienced compound trauma from the Sterling shooting, protesting, and major flooding events. It can be expected that survivors experienced similar mental health challenges following the flood. Common diagnoses following the flood were depression, anxiety, and PTSD (Phillippi, 2019). With the closure of the Earl K. Long Hospital, many residents in the north Baton Rouge area experienced a shortage of mental health providers (Keegan et al., 2018). East Baton Rouge was designated a mental health professional shortage for poverty areas (Phillippi, 2019). Many local behavioral health agencies were at full capacity following the flood (Keegan et al., 2018). At the beginning of 2016, Governor Edwards expanded Medicaid and eligibility for Louisiana residents (Phillippi, 2019). Medicaid enrollment began one month prior to the flood. In 2018, Mayor Broome recognized the need to treat the trauma effects on north Baton Rouge and secured a $6 million grant to focus on trauma-informed care (Grover, 2020). The grant brought together many community leaders to address the racial equities of the city (Grover). Resilient Baton Rouge (RBR) started as individuals who recognized the community's struggles and developed an evidence-based approach to address post-

disaster behavioral health issues (Keegan et al., 2018). RBR supported community resilience following the flood between formal and informal support systems (Keegan et al., 2018). RBR worked with local agencies, communities, and government to increase resilience and ability to overcome future challenges (Phillippi, 2019). Studies show that residents in Baton Rouge doubled their utilization of behavioral health services through Medicaid benefits following the flood (Phillippi, 2019). Social services workers recognized that non-white communities had few resources to recover from the flood (Keegan, 2018). There is a stigma surrounding mental health services that residents should seek following the disaster (Keegan, 2018).

Religious/Spiritual Beliefs and Trauma

In the events following a traumatic event, survivors turn to their religious or spiritual (R/S) beliefs to overcome hardships. Religion is an individual's practice (Hill et al., 2000). Spirituality is an experience that does not necessitate religious adherence (Hill et al., 2000). Some view spirituality as a person's views within or outside religious content (Paloutzian & Park, 2013). Spirituality can have some aspects of religion intertwined; some individuals' concepts of spirituality can be viewed without religion. Spirituality can call on a person's sense of meaning, morality, and relationship with the world (Van Hook, 2016). Individuals use their religious or spiritual (R/S) beliefs and practices based on their quest to gain a better understanding of life, meaning, and relationships (Moreira-Almeida & Koenig, 2006). People can engage in religious or spiritual practices such as rituals, reading scriptures, meditation/mindfulness, yoga, music, or art (Mattis, 2002; Kushner, 2007).

Religious beliefs are the most effective coping strategy following a natural disaster (Mesidor & Sly, 2019). Some traumatized survivors can feel God's support

during their most challenging hours (Park et al., 2017). Individuals' R/S usually determines how they will cope with traumatic events. Not all R/S beliefs determine a better outcome (Peres et al., 2007). Some associations with higher power can be positive or negative (Bryant-Davis et al., 2015). People with positive religious coping skills may have a sense of belonging, connection with others, and greater benevolent meaning (Pargament et al., 2011). For example, people who engage in spiritual practice report having a positive meaning during the early stages of bereavement (Cadell et al., 2003). Positive R/S experiences show greater well-being and health (Hebert et al., 2009). Depending on the extensive loss in some flood survivors, there is an increase in church-based emotional support (Dispenza et al., 2018). Hebert et al. (2009) found that some survivors were angry because they felt that God had abandoned them. With negative religious coping, survivors have negative thoughts toward God, spiritual doubting, questioning, and discontent towards religion (Pargament et al., 2011). Anger worsens mental health problems and undermines life satisfaction (Hebert et al., 2009).

Religion/Spirituality Belief and Clinicians Competency

In trauma-informed care, clinicians have many approaches to utilize with clients. PTSD is present in trauma survivors and is the primary focus of psychotherapy (Park et al., 2017). R/S beliefs are essential to all cultures (Peres et al., 2007). It is noted that both social support and spirituality are often not acknowledged by mental health professionals as culturally relevant factors in coping (Fowler & Hill, 2004). There has been an increased urge for mental health professionals to integrate R/S beliefs into their therapy (Hebert et al., 2009). However, mental health

professionals do not always receive adequate training in school on the impact of R/S on their client's life (Walsh et al., 2021).

Clinicians must establish a safe and trusting atmosphere before interpreting the client's trauma (Parks et al., 2017). Once trust is developed, the clinician can assess how R/S beliefs impact the client's global views. Trauma can complicate a survivor's global meaning, change future perspectives, and cause depressive symptoms (Janoff-Bulman, 1991; Park et al., 2017). Therapists may feel comfortable allowing clients to share existential and spiritual issues that may arise following a traumatic event (Shaw et al., 2005). Some clinicians experience value conflicts with specific cultural contexts (Walsh et al., 2021). Depending on traditional and conservative cultures, the therapist can experience individuals who lack diversity and resources (Walsh et al., 2021). Participants in Walsh et al.'s (2021) study reported that they prefer a therapist who does not act as an authority on R/S beliefs but engages with them respectfully and curiously.

Assigning Meaning through R/S Beliefs to Traumatic Experiences

After a traumatic event, survivors try to assign meaning to what has happened to them. The meaning-making model suggests that after a life-changing event, an individual's experience can change their outlook, global worldview, and meaning of life (Park, 2005). A worldview is a set of good or bad beliefs, behaviors, relationships, and goals the person has experienced throughout life (Koltko-Rivera, 2004). Worldviews assess human nature, relationships, time, activity, and assumptions of culture (Lewis Hall & Hill, 2019). Religion is a source of comprehensive meaning systems (Lewis Hall & Hill, 2019). Religion can assign meaning to suffering, resilience, and personal growth throughout their lifetime (Park, 2005). Consistent with

other PTSD treatments, meaning-making models focus on reliving distress and revitalizing the client's purpose in life after trauma (Park et al., 2017). Distress usually involves some discrepancy between the traumatic event and worldview beliefs. Survivors can experience several types of distress, such as self-blame, poor coping skills, suffering in silence, and weakened religious views (Lewis Hall & Hill, 2019). To reduce distress, the person would have to work on restoring previous views (Lewis Hall & Hill, 2019). Many inconsistencies exist in how religious practices may help individuals during traumatic times (Boulware & Bui, 2016). Mental health professionals and religious organizations can intervene after a traumatic event occurs and assist in decreasing negative mental health symptoms and coping appropriately (Park & Slattery, 2013)

Social Support and Trauma

Like R/S beliefs, social support is another factor in assisting individuals to overcome trauma. Social support can be actual or perceived emotional, formal, or informal support (Unchino, 2013). Some seek support from their partners, family members, children, grandchildren, therapists, doctors, case managers, and the community (Dale & Safren, 2018). Ministers and their congregations in the church also provide another important social support system (Fowler & Hill, 2004). Social support is known as a protective factor against negative psychological factors. Social support can serve as a health-restorative factor by meeting human's basic social interaction needs (Lincoln et al., 2005). In extreme traumatic events, emotional and psychological distress increases and can cause a major disruption to an individual's social functioning (Lincoln et al., 2005). Social support can buffer stress endured during a traumatic event (Lincoln et al., 2005). There are higher results of depression

in people who have low social cohesion (Le et al., 2013). Lincoln et al. (2005) reported that several studies have established that social support has psychosocial resource and encourage positive mental health outcomes. Some studies show inconsistent reports on whether social support reduces negative mental health symptoms following a disaster (Shang et al., 2020). Previous social support instruments only looked at the quantity of social support and not the quality (Shang et al., 2020). Examples of quantity social support would be tangible, informal, assistance in rebuilding a home and physical affection (Shang et al., 2020). A deeper look into when and where the support is given can impact how the person recovers following a traumatizing event (Shang et al., 2020). Some areas of the effectiveness of social support are skillfulness, sensitivity of delivery, ease of obtaining support, and how the individual perceives the support (Shang et al., 2020). An analysis by Shang et al. (2020) showed that social support and mental health yielded better results when high-quality support exists. Many survivors showed lower levels of mental health distress months after the natural disaster (Shang et al., 2020). One of the most common positive outcomes of social support during a disaster is an increase in post-traumatic growth in the domain of relationships with others (Kaniasty, 2020).

Limitations with Social Support

Following a natural disaster, some survivors cannot stay in their homes. The damage to their homes can leave them unlivable for a long time. The impact of being displaced after a disaster can make an impact on an individual's psychological functioning (McGuire et al., 2018). When people are displaced from their homes, their accessibility to social support may also change. Being away from their close family and friends for a significant amount of time is distressing for someone who has lost all

their material belongings (Kaniasty, 2020). For example, survivors of Hurricane Katrina in 2005 were displaced all over the United States (McGuire et al., 2018). They were far away from loved ones and their local community.

The distress the individuals incur can undermine the quality of their relationships. Reports indicate that cases of physical and sexual abuse against a significant other tend to increase after a disaster (First et al., 2017). Women who experience partner abuse showed improved coping skills when combined with social support (Fowler & Hill, 2004).

Another possible limitation survivors may experience is a lack of social status due to economic resources. Financially challenged individuals can find it difficult to find support due to racial discrimination (McGuire et al., 2018). Survivors report negative mental health status due to discrimination they experienced while interacting with formal supports (McGuire et al., 2018). Individuals with higher social status and power avoid certain risks following trauma (House et al., 1990). Unmarried individuals, those living alone, and the less educated ones receive less social support following a disaster (Kaniasty, 2020). Lastly, individuals who live in disaster-prone areas express connectedness with community members who have lived through the experience. However, they experience increased distress with interactions with other survivors regarding the disaster (Kaniasty, 2020).

Perceived Social Support in Different Groups

Individuals can view social support differently based on age, gender, culture, and background. Younger flood survivors show higher levels of resilience when they receive social support (Cherry et al., 2022). According to research, school-aged children can experience distress due to the loss of their social support system from

their schoolteachers, staff, and classmates (Bernstein & Pfefferbaum, 2018). Younger people show they are in more need of peer and family support compared to older adults. The latter are less likely to call on others following a flood event (Cherry et al., 2022). Elderly individuals still experience less negative mental health distress when they receive social support (Cherry et al., 2022). There have not been many studies supporting the relevance of social support after a disaster (Shang et al., 2020). McGuire et al. (2018) reported that Hurricane Katrina survivors who perceived receiving social support reduced the likelihood of depressive symptoms. Within the African-American community, there is no beneficial effect of social support on levels of depression (Lincoln et al., 2005). Even with family support, depressive symptoms in certain individuals did not decrease (Dale & Safren, 2018). African American women face racial discrimination, stigma, and gender biases that often reflect that it takes a village to overcome many of the hardships they face to have resilience (Dale & Safren, 2018). Some African Americans can be wary of seeking formal support due to past mistrust of the healthcare systems (Fowler & Hill, 2004). It is not uncommon for African Americans to experience institutional racism when receiving medical and mental health treatment (Turner & Kramer, 1995). Even with mixed minority communities, social connectedness supports survival following a disaster (Airriess et al., 2008; Hill-Collins, 2000).

Conceptual Framework and Posttraumatic Growth (PTG)

I used Tedeschi and Calhoun's (1995) conceptual framework of Posttraumatic growth in this study. Tedeschi and Calhoun (1995) established that positive effects can happen following a traumatic event in some individuals. Tedeschi and Calhoun (1995) established that individuals' views are enhanced, greater compassion towards

others, better relationships, and views on life change following a traumatic experience. PTG has been found in survivors following natural disasters (Bernstein & Pfefferbaum, 2018; Mesidor & Sly, 2019; Tedeschi & Calhoun, 1995).

The conceptual framework for this study involves the concepts from Tedeschi and Calhoun (1995) related to religious/spiritual beliefs and social support. The framework also includes the concept of PTG varying demographics, psychological, and social variables (Nalipay et al., (2017). This framework aligns with the population of focus of the study, which is the BIPOC community of Baton Rouge since it can be applied to various demographics. Additionally, previous studies have examined Baton Rouge's survivors and PTG (Dispenza et al., 2019; Zeligman et al., 2019). Results from previous research show that survivors' ability to live through a traumatic event can identify positive changes that happened in their lives (Mesidor & Sly, 2019). There are several contributive factors that allow for positive growth such as social support and religious coping, which are variables being researched in my study (Mesidor & Sly, 2019; Tedeschi & Calhoun, 2004).

Survivors experiencing major loss can see growth in different areas of their lives. PTG positively impacts self-perception, interpersonal relationships, and philosophy of life (Tedeschi & Calhoun, 1996). When looking at self-perception, survivors often show increased personal strength and self-assuredness (Tedeschi & Calhoun, 1996). Individuals living through such trauma may also have a great sense of self-reliance and not depend on others if they are faced with any difficulties (Tedeschi & Calhoun, 1996). Looking at interpersonal relationships, survivors experienced a deepening of relationships, and an understanding of how important relationships are when faced with losing everything (Tedeschi & Calhoun, 1996).

Lastly, the philosophy of life changes as individuals gain a better regard and appreciation of life (Tedeschi & Calhoun, 1996).

Individuals who experience trauma also may experience PTG or PTSD. PTG and PTSD are two separate concepts that co-exist to support what happens to survivors (Bernstein & Pfefferbaum, 2018). There are several types of traumas that PTG accounts for, such as health crises, sexual assault, car accidents, being refugees, living through war, witnessing injury, and experiencing natural disasters (Bernstein & Pfefferbaum, 2018; Tedeschi & Calhoun, 1995). Positive growth following a natural disaster is well-documented (Cieslak et al., 2009; Hafstad et al., 2011; Kilmer & Gil-Rivas, 2010). Everyone does not always experience PTG following trauma (Chowdhury, 2019). Individuals can experience secondary adversity with property damage, rescue and recovery efforts, relocation, and economic loss (Bernstein & Pfefferbaum, 2018).

Some may struggle to comprehend that good things can come from adversity (Waichler, 2022). Studies have shown that the ability to overcome trauma may come from the gene RGS2, which is linked to fear-related disorders such as anxiety, PTSD, and panic disorder (Chowdhury, 2019). Survivors of tragedy experience similar negative reactions like sadness, depression, distress, guilty anger, and many physical health symptoms (Tedeschi & Calhoun, 1995). With negative psychological and physiological symptoms, it may seem impossible to overcome their circumstance.

It has been found that survivors who are more extroverted and yield high openness tend to experience PTG (Chowdhury, 2019). While it may be uncommendable to overcome some trauma, survivors find it important to heal and achieve the best life they can. Historically, societies like Hebrews, Islam, Greeks,

Buddhists, and Christians document transforming adversity and suffering into more positive possibilities (Bernstein & Pfefferbaum, 2018; Chowdhury, 2019; Tedeschi & Calhoun, 1995). Thus, history shows that people from all backgrounds can overcome adversity.

Posttraumatic Growth Inventory

The Posttraumatic Growth Inventory (PTGI) was developed by Tedeschi and Calhoun (1996) to determine PTG in survivors. It is a 21-item tool that addresses five factors associated with the positive outcomes of individuals who survived trauma (Mesidor & Sly, 2019; Tedeschi & Calhoun, 1996). The scale uses a six-point Likert-type scale ranging from *no experience* to *experiencing great change* after the crisis. PTGI looks at five factors: *Appreciation of Life*, *Relationships with Others*, *New Possibilities*, *Personal Strength*, and *Spiritual Change* (Chowdhury, 2019; Tedeschi & Calhoun, 1996; Waichler, 2022). The first factor, *Appreciation of Life*, looks at the outcomes of trauma as the individual is grateful to be alive, embracing life and their future (Chowdhury, 2019). Secondly, *Relationships with Others* causes survivors to recognize how important relationships are in their daily life, and they try to nurture those relationships more (Chowdhury, 2019). Thirdly, *New Possibilities in Life* helps survivors recognize the survivor's new look at life and the choices they can now make for their lives (Chowdhury, 2019). Fourthly, *Personal Strength* looks at the resilience and healing after the tragedy (Chowdhury, 2019). Lastly, *Spiritual Change* can overlap R/S beliefs and look at R/S beliefs growing and deepening with PTG (Chowdhury, 2019).

There are criticisms regarding PTGI. Firstly, PTGI concentrates on the perceived happiness and wellness of survivors' post-traumatic events (Chowdhury,

2019). The tool does not look at survivors' lives before the disaster (Bellizzi et al., 2010; Ruini et al., 2013). Additionally, PTG is hard to determine in certain populations. When looking at cancer patients, there is no change in the Quality of Life of cancer survivors (Chowdhury, 2019). Lastly, there are concerns about demographic barriers. Women were the majority of participants in the PTGI scale, and limited male participants (Chowdhury, 2019). A high PTGI score indicates a positive transformation (Chowdhury, 2019). Women tend to score higher on the PTGI, suggesting that women respond to trauma differently than men. It is hard to determine if there is a valid reason behind the difference or if the results are skewed due to the misrepresentation (Chowdhury, 2019).

Posttraumatic Growth in Clinical Practice

While therapists may not be involved in the tragedy before it happens, it is essential that they introduce the concept to survivors (Collier, 2016). PTG is a concept that should be gently introduced to survivors not to make sure they do not feel that their experience is minimized (Collier, 2016; Tsai et al., 2017). Additionally, therapists should be neutral, respectful, and have unconditional positive regard (Tedeschi et al., 2015). A few structured interventions can be utilized in therapy (Tsai et al., 2017). Some useful approaches clinicians use with clients that can improve PTG are cognitive-based therapy (CBT), trauma-informed therapy, Eye movement desensitization and reprocessing therapy (EMDR), Reality therapy, mindfulness-based approaches, Accelerated Resolution Therapy (ART), play therapy, and drama therapy (Chowdhury, 2019; Malchiodi, 2008; Tsai et al., 2017). Group-based intervention is used for some survivors. Group therapy and other peer-based programs are crucial for providing recovery support (Tsai et al., 2017).

Conclusion

In this chapter, I have reviewed all relevant literature used to study the 2016 flood and its impact on Baton Rouge, Louisiana residents. Additional literature showed racial tensions within the city leading up to the flood. In this chapter, I also reviewed the impact of social support, R/S beliefs on trauma, and PTG. There are a few gaps in the literature that were observed. First, in the original study conducted by Dispenza et al. (2019), there was a lack of BIPOC participants. It was observed during the literature search that specific BIPOC members and data on how their religion assists in overcoming traumatic events were not found. Much of the literature gave a broad sense of how religion can affect individuals. However, it did not provide many details on how specific culture's religious beliefs assist them in overcoming traumatic experiences. When I considered this quantitative study to examine the potential associations between flood exposure, PTSD, social support, religious/spiritual beliefs, and PTG, I hoped to make BIPOC members more visible relating to these needs as they converge with access to mental health care. Additionally, this study sought more data on how the BIPOC community interprets social support and R/S beliefs in PTG. In the next chapter, I will discuss the research methodology, questions, hypotheses, populations, instruments, data collection, and ethical considerations.

Chapter 3: Research Method

Introduction

The purpose of this study was to examine religious/spiritual beliefs and social support to assist flood survivors in decreasing traumatic responses. Utilizing relevant literature on the 2016 flood in Baton Rouge, I explored the BIPOC population, social support, religious/spiritual (R/S) beliefs, and posttraumatic growth (PTG). This chapter includes a description of this study's methods and procedures, which include the research design, research question, and population. Also, this chapter includes the instrumentation and data collection process.

Research Design and Rationale

This quantitative study used the survey methodology to collect data. This study is non-experimental and does not observe variables without manipulation (Salkind, 2010). The non-experimental design of the study allowed the researcher to look at the relationship between independent and dependent variables without manipulation (Burkholder et al., 2016). The independent variables in this study are social support (as measured by the *Multidimensional Scale of Perceived Social Support* [*MSPSS*]; Zimet et al., 1988) and religious/spiritual beliefs (as measured by the *Brief RCOPE*; Paragament et al., 2011). The study's dependent variable is the participants' level of PTG (as measured by the Posttraumatic Growth Inventory Short Form [*PTGI-SF]*; Cann et al., 2008). The study provided initial indications on whether social support and R/S beliefs impact the levels of PTG in the BIPOC community following a 2016 flooding event.

Survey methods were utilized to disseminate online to BIPOC flood survivors in Baton Rouge. The surveys utilized for the study *were PTGI-SF*, the *Brief RCOPE*,

and *MSPSS*, which were used to collect the quantitative data from the participants. Survey methods allow participants to remain anonymous while participating in the study (Groves et al., 2011). Participants' anonymity was a factor for study completion and potential engagement, and I was hopeful this would encourage them to complete the study. The use of surveys can return high-quality results and keep the study cost-effective by utilizing an online survey tool, SurveyMonkey (Groves et al., 2011). I gained permission to utilize the following instruments for academic use only: the *Multidimensional Scale of Perceived Social Support* (*MSPSS*; Zimet et al., 1988), the *Brief RCOPE* (Paragament et al., 2011), and the Posttraumatic Growth Inventory Short Form (*PRGI-SF*; Cann et al., 2008).

Methodology

This study was quantitative in nature and utilized survey methodology to answer the research question. The research question was: to what extent do religious/spiritual beliefs (as measured by the *Brief RCOPE*) and social support systems (as measured by the *MSPSS*) have on posttraumatic growth (as measured by *PTGI-SF*)? In the following section, I will review the population, sampling methodology and procedures, and the recruitment, participation, and data collection process.

Population

For this study, the target population was East Baton Rouge Parish (Louisiana, USA) residents who lived in the parish during the August 2016 flood. East Baton Rouge Parish consists of Baton Rouge, Baker, Zachary, and Central cities. Participants needed to be at least 18 years old during the survey. The BIPOC community of East Baton Rouge Parish consists of at least 61.9% or 137,533 of the

parish (U.S. Census Bureau, 2021). BIPOC participants came from any socioeconomic background, religious/spiritual beliefs, ethnicity, and gender. Specifically, I intended to find individuals who identify themselves as religious or spiritual. This study was sent via email to different religious and spiritual organizations, including Jewish synagogues, Buddhist temples, Muslim mosques, and other spiritually-affiliated entities across the city of Baton Rouge to attempt to get more representation from other backgrounds. There was not one particular religion or spiritual belief focused on during the study. I also sent emails to health centers, CareSouth, and Open Health Care Clinic with various backgrounds of patients who may meet the qualifications for the study.

Sampling and Sampling Procedures

For this study, nonprobability sampling methods were used. Nonprobability sampling is for non-random selection criteria (Burkholder et al., 2016). Participants from East Baton Rouge Parish and the BIPOC community assisted in answering the research question. Due to not knowing the population size within East Baton Rouge Parish, which was BIPOC during the 2016 flood and survived the flood event, non-proportional quota sampling was used.

To calculate the required sample size for this study, I used version 3.1 of G*Power (Faul et al., 2009). I set the α level for my study, or probability of making a Type I error, at .05 (5%) and selected two predictors. I set the power level (1-β), or likelihood of detecting an effect, at .80 (80%). I selected .15 for the effect size, leading to an estimate of 68 as the recommended sample size for the proposed study. In previous studies of Baton Rouge flood survivors, researchers had to exclude some participants due to them not meeting criteria such as not residing in a flood-affected

area or responding to the survey multiple times (Dispenza et al., 2018). Therefore, the *a priori* sample size was 100 to account for any participants who did not meet the criteria, and this provided me with sufficient data to complete my study.

Procedures for Recruitment and Participation and Data Collection

I emailed the survey to several local entities, such as churches, healthcare clinics, and East Baton Rouge Parish universities. I had each entity disseminate the survey and include my contact information should any participants want to reach out. The informed consent included mental health resources such as crisis and suicide hotline contact information, and tips on finding a counselor should anyone feel distressed following the survey. Participants were informed they could withdraw from the study without penalty or repercussions. I reached out to local faith-based organizations such as Bethany Church of Baton Rouge, Al-Hablulmateen Islamic Center Inc., Unified Jewish Congregation of Baton Rouge, Tam Bao Meditation Center, Rose Hill Missionary Baptist, and Datta Temple. I contacted local healthcare clinics such as CareSouth and Open Health Care Clinic. Lastly, I utilized social media outlets such as Facebook, Twitter, and LinkedIn to recruit participants through a post dedicated to the study. I made a Facebook page for this study that included a description of the study, participants' criteria, possible risks and benefits, and a link to the SurveyMonkey website where the survey was available. Weekly posts and messages were sent to group members to encourage them to participate in the study and share the link with others who wanted to take the survey. I posted the study flyer on my personal Facebook page and specific Facebook groups. I asked friends, family members, colleagues, and group members of those Facebook groups to share my study with anyone with the qualifications. I reached out to administrators of the

following Facebook groups to seek permission to post to their pages: Cajun Navy, Baton Rouge Happenings, Black Business Owners of Baton Rouge, Small Businesses of Baton Rouge, Events in Baton Rouge Parish, Dissertation Survey Exchange, Baton Rouge Counselors, and Therapists.

Since the survey was completed from a SurveyMonkey, a web-based program, participants have a better sense of privacy with the data that is being collected (Burkholder et al., 2016). SurveyMonkey has a HIPAA-compliant server that stores all data collected from participants (SurveyMonkey, 2017). SurveyMonkey takes appropriate administrative, physical, and technical safeguards to defend protected health information (PHI). Participants could complete the survey at a time convenient for their schedule. SurveyMonkey included informed consent at the beginning of the survey. A series of demographic questions were asked, such as age, gender, marital status, ethnicity, and religious/spiritual beliefs. The demographic questions are being asked to get a general sense of the characteristics of the population being surveyed.

Additionally, demographic questions were created to get a clearer picture of the participants' different types of religious/spiritual beliefs, and for this study there was a fill-in block of questions for participants to answer to their beliefs. A filter question was asked to verify if the participants had lived through the 2016 flood in East Baton Rouge Parish and if they were from the BIPOC community. It was a yes-or-no question. If the participant answers *no*, the survey immediately ended, and they will be thanked for their time. If participants answered *yes*, they would be directed to complete the rest of the survey. At the end of the survey, there was a debriefing document. A list of mental health resources (988 National Mental Health Hotline, SAMHSA's National Helpline, Louisiana Spirit Crisis Counseling Program, and

National Suicide Prevention Lifeline) was provided to participants who may have experienced any distress following the study. A report summary was sent to all participating local entities and posted on the Facebook page.

Instrumentation and Operationalization of Construct

I used a demographic questionnaire and three validated instruments to collect relevant data for this study. I created a survey in SurveyMonkey that collected participants' age, gender, marital status, ethnicity, and religious/spiritual beliefs. The instruments collected data on PTG, religious coping, and social support. I have gained permission to use all instruments in this study. In this section, I will describe all instruments and surveys used in this study.

Demographic Survey

I created the demographic questionnaire to collect basic descriptive information about the respondents. Participants were asked about their residence, age, gender, relationship status, race, and religion. Questions related to residence, age, and race provided exclusion criteria for those who did not live in East Baton Rouge during the flood, were younger than 18 at the time of the survey and were not of the BIPOC community.

Posttraumatic Growth Inventory Short Form

Cann et al. (2008) developed the Posttraumatic Growth Inventory Short Form (*PTGI-SF)*. The *PTGI-SF* is a 10-item instrument that measures PTG. It uses a 6-point Likert-type scale ranging from 0 (Not at all) to 5 (To a great degree). The *PTGI-SF* is the dependent variable (DV) of the study. The scale contains two items, each from the five subscales from the original PTGI created by Tesdeshi and Calhoun (1996). The five subscales are *Relate to Others*, *New Possibilities*, *Personal Strength*, *Spiritual*

Change, and *Appreciation of Life*. The inventory contains two questions from each subscale, but they are random and do not impact the performance of the inventory (Cann et al., 2008). The shortened form keeps all essential information from the original form. For the short form, the internal reliability is slightly lower than the original form and reliability range of .90 across various samples. The sample for the PTGI-SF was 1351 adults, 377 men and 972 women, and the mean age ranged from 19.9 to 70.1 years old (Cann et al., 2008). The sample contained 70% White participants; a second sample consisted of college students, 45 males, and 141 females (Cann et al., 2008). The sample contained 68% white and 16% African American responses, with a range of ages from 19 to 58 years (Cann et al., 2008). When it was published, the instrument was somewhat diverse from other populations (Cann et al., 2008). Cann granted permission to utilize this instrument, which can be found in Appendix D.

The Brief RCOPE

Paragament et al. (2011) developed the *Brief RCOPE*. The *Brief RCOPE* is a 14-item instrument of religious coping following major life stressors. The *Brief RCOPE* was used as one of the independent variables (IV). The full scale contains 21 subscales, totaling 105 items total. The scale was designed to be more efficient and meaningful to religious models and studies on wellness. The subscale looks at the positive coping of religion (PRC), such as connectedness with a God, a transcendent force, and a greater sense of meaning. Also, it looks at the negative aspects of religion, such as spiritual tension, conflicts with God, questioning, and negative appraisal of religious meanings (NRC). For this study, I am looking at religious coping as a whole and not at the subscales. The *Brief RCOPE* demonstrates internal

consistency with both positive and negative subscales. The Cronbach's alpha coefficient for the positive and negative subscales in college students and hospital patients over 55 are .90, .87, .81, and .69 (Paragament et al., 2011). The instrument demonstrates good concurrent validity, with PRC yielding strong consistency related to positive psychological constructs and spiritual well-being (Paragament et al., 2011). NRC yields poor functioning of anxiety, depression, PTSD, and other negative aspects. Additionally, empirical studies show the subscales' construct validity, predictive validity, and incremental validity (Paragament et al., 2011). Permission was granted to use the *Brief RCOPE*, found in Appendix F.

Multidimensional Scale of Perceived Social Support

Zimet et al. (1988) developed the *MSPSS*. The *MSPPS* is a 12-item scale that looks at the perceptions of social support from family, friends, and significant others. There is a seven-point scale that ranges from low to high support. There are three subscales: family, friends, and significant other. The *MSPSS* is the other IV in this study. I am looking at social support as a whole and not the subscales for this study. The scale is described as simple to use and time-conserving. The instrument demonstrates good internal consistency. The Cronbach's coefficient alpha for significant other, family, and friends are 0.91, 0.87, and 0.85. The reliability overall for the scale is 0.88 (Zimet et al., 1988). The test-retest reliability for Significant Other, Family, and Friends is 0.72, 0.85, and 0.75. The test-retest reliability for the full scale is 0.85. The sample for the instrument was made up of 275 Duke University students from an introductory psychology class. Students of the 275 students were 136 women and 139 men, ranging from ages 17 to 22 (Zimet et al., 1988). High levels of social support resulted in low levels of depression and anxiety as measured by the

Hopkins Symptoms Checklist (Zimet et al., 1988). As this target population has not been routinely studied, these three measures would be useful in exploring the religious/spiritual beliefs, social support systems, and post-traumatic growth of the BIPOC community within Baton Rouge within the context of a historical study relating to its 2016 flood. Permission was granted for using this instrument and can be found in Appendix B.

Data Analysis Plan

I used a demographic survey and three validated instruments to collect relevant data for this study. I created a survey in SurveyMonkey that collected participants' age, gender, marital status, ethnicity, and religious/spiritual beliefs. The instruments collected data on PTG, religious coping, and social support. I gained permission to use all instruments in this study (see Appendices). Additionally, there were two open-ended questions in which respondents could give written responses. In this section, I will describe all instruments and surveys used in this study.

The data collection process was not complete until I gathered enough respondents to meet the sample size needed for the study. After downloading the data that were collected through SurveyMonkey, I opened the data in an Excel spreadsheet to start to clean the information for any errors or in completed surveys. I inspected each respondents' answers and deleted any respondents that did not fully complete the survey. Once the data were cleaned, I utilized Statistical Package for Social Sciences (SPSS; Version 27) software to analyze the data. For the demographic section of data, I was able to determine the frequencies and percentages of respondents per question that was asked.

Testing Hypotheses

For this study, a multiple regression analysis was completed to determine if each factor (social support and religious/spiritual beliefs) influences PTG. Multiple regression assists in analyzing the relationship between a single dependent variable and several independent variables (Mishra & Min, 2010). No covariates or confounding variables were included. Including covariates may increase bias (Lenz & Sahn, 2017). Confounding variables can lead to results not reflecting the actual relationship between the variables (Pourhoseingholi et al., 2012).

Research Question

RQ1- Quantitative: To what extent do religious/spiritual beliefs (as measured by the *Brief RCOPE*) and social support systems (as measured by the *MSPSS*) have on posttraumatic growth (as measured by *PTGI-SF*)?

Hypotheses

H_0: Flood survivors who have religious/spiritual beliefs and social support systems identify as having no posttraumatic growth, as evidenced by PTGI-SF.

H_1: Flood survivors who have stronger religious/spiritual beliefs and social support systems identify as having increased posttraumatic growth, as evidenced by PTGI-SF.

For the descriptive variables, in which the *Post-Traumatic Growth Inventory Short Form*, *Multidimensional Scale of Perceived Social Support*, and the *Brief RCOPE*, were used, I was able to determine the median, mode, mean, and standard deviation of each respondent per descriptive variable.

A correlation analysis allowed one to analysis the relationship between two variables. Correlation analyses examine the relationships between the *PTGI-SF* and

the *MSPSS*, as well as the *MSPSS* and the *Brief RCOPE*, and lastly the *PTGI-SF* and the *Brief RCOPE*. Based on the strength of the correlation, I was able to determine if there was a statistical significance between each variable. Additionally, I was able to determine if there was a weak or positive association between each variable.

The regression analysis was used to explanatory power. The regression analysis took place with the dependent variable, Post-Traumatic Growth, and the two independent variables, Social Support Systems and Religious/Spiritual beliefs. Based on the regression, I was able to determine R value, R-squared, and standard error of the estimate.

The results of the ANOVA table, the regression model assessed the impact of religious/spiritual beliefs (Brief RCOPE) and social support systems (MSPSS) on posttraumatic growth (PTGI-SF). Additionally, I was able to determine the *F*-statistic and *p*-value. With the results of the ANOVA, I would have enough data to either accept or reject the hypotheses.

Research Question

RQ1- Quantitative: To what extent do religious/spiritual beliefs (as measured by the Brief RCOPE) and social support systems (as measured by the MSPSS) have on posttraumatic growth (as measured by PTGI-SF)?

Hypotheses

H_0: Flood survivors who have religious/spiritual beliefs and social support systems identify as having no posttraumatic growth, as evidenced by PTGI-SF.

H_1: Flood survivors who have stronger religious/spiritual beliefs and social support systems identify as having increased posttraumatic growth, as evidenced by PTGI-SF.

Statistical Test

For this study, a multiple regression was completed to determine if each factor (social support and religious/spiritual beliefs) influences PTG. Multiple regression assists in analyzing the relationship between a single dependent variable and several independent variables (Mishra & Min, 2010). No covariates or confounding variables were included. Including covariates may increase bias (Lenz & Sahn, 2017). Confounding variables can lead to results not reflecting the actual relationship between the variables (Pourhoseingholi et al., 2012).

Threats to Validity

In this section, I will look at possible threats to validity. I will describe threats to both external and internal validity.

External Validity

A possible threat to external validity is the ability to generalize the results outside of the state of Louisiana. Louisiana culture is known for the food and the people. Southerners have a reputation for their hospitality and can be inviting to others. Many residents are taught to be polite, kind, and giving. Those values and beliefs differentiate the South from the rest of the United States (Megehee & Spake, 2008). Subject selection may threaten external validity. The BIPOC community of Baton Rouge, Louisiana, is the focus of this study. The BIPOC population has not been studied as much as its counterparts in previous studies (Dispenza et al., 2018); thus, I intended to use the BIPOC community to see the influences of social support and religious/spiritual beliefs on post-traumatic growth. Lastly, another threat to external validity is distractibility. Since the study is being conducted over the Internet, I cannot control the environment in which the participant is taking the survey. At the

beginning of the study, a statement stated that the participants should be in a quiet place with limited distractions for at least 15 minutes to complete the survey.

Internal Validity

One possible threat to internal validity is history. History may influence the participant's ability to recall an event accurately due to an outside factor that the study may not measure (Burkholder et al., 2016). Also, participants may be unable to remember specific details surrounding the August 2016 flood and may have difficulty answering survey questions. Additionally, participants may not remember the impact any support had on their recovery following the flood. For example, participants may have had professional support, such as counseling, to lessen the effects of traumatic responses and might not remember the impact on their recovery. Participants were asked to respond to survey questions to the best of their ability to ensure the most accurate answers.

Ethical Procedures

Data collection started when approval was received from Walden University's Institutional Review Board (IRB) to ensure this study meets all ethical standards. Once approval was given, the study was assigned an IRB number (# 07-10-23-0745931). During the recruitment phase of the study, the invitation flyer and email included the target population and the purpose of the study. All participants were to be over 18 years of age to participate in the study. Once potential participants clicked the survey link, they were taken to the consent page for review. The consent form detailed the purpose of the study and procedures. The consent informed participants that the study was voluntary and that they had the right not to participate at any time. The risks and benefits were disclosed, and minimal risk could happen from the study.

Since the study is non-experimental, participants would have to recall memories from the August 2016 flood, which may be traumatic. The informed consent included information on how the study would protect the participants' privacy and how data would be stored. If participants wanted to ask any questions, the contact information was available. Data collection began after participants made an informed decision to participate in the study. The demographic questionnaire and three instruments would follow the informed consent page.

After completing the survey, participants were taken to the debriefing page that (a) thanked participants for their participation, (b) included contact information for the study, and (c) provided a list of mental health resources. If a participant decided to withdraw from the study, any part of the started data would not be included in the final analysis. A recruitment and data collection log was kept in order to track progress during this period. The recruitment log tracked dates of when emails were sent out and reminders. The data log tracked the original and clean data presented to the committee members. SurveyMonkey has a privacy practice, the Anonymous Responses Collector, which was selected to keep responses anonymous and would not store emails, phone numbers, or other personal information. SurveyMonkey deletes IP addresses after 13 months ("Data Privacy & Security," n.d). Data stored on SurveyMonkey is in a secure SOC 2 accredited data center ("Data Privacy & Security," n.d.).

Additionally, SurveyMonkey data are protected by password and two-factor authentication for an extra layer of security. All data stored on my external hard drive will be in my home office, in a locked file drawer behind a locked door. My external hard drive has a password required before each use. Additionally, committee

members have access to stored data and data analyses. All data collected will be destroyed after 5 years per Walden University's policy.

Summary

The goal of this chapter was to describe this quantitative study. The purpose was to examine if a potential relationship exists between flood PTG, religious/spiritual beliefs, and social support. In this chapter, I reviewed the methodology, population, criteria for recruitment, data collection methods, threats to validity, and ethical standards. The content of the questionnaire and three instruments have been described and approved for use in this proposed study. In Chapter 4, I will describe the data collection for the research question in this proposed study. Chapter 4 will show the test of the hypothesis, data screening, organization of data, and findings.

Chapter 4: Results

Introduction

This study aimed to assess the relationship between religious/spiritual beliefs and social support systems on PTG following the August 2016 flood in East Baton Rouge Parish. The following research questions and hypotheses were addressed:

RQ1- Quantitative: To what extent do religious/spiritual beliefs (as measured by the Brief RCOPE) and social support systems (as measured by the Multidimensional Scale of Perceived Social Support (MSPSS) have on posttraumatic growth (as measured by Posttraumatic Growth Inventory Short Form (PTGI-SF)?

H_0: Flood survivors who have religious/spiritual beliefs and social support systems identify as having no posttraumatic growth as evidenced by the Posttraumatic Growth Inventory Short Form (PTGI-SF),

H_1: Flood survivors who have stronger religious/spiritual beliefs and social support systems identify as having increased posttraumatic growth as evidenced by Posttraumatic Growth Inventory Short Form (PTGI-SF).

In this chapter, I will answer questions through an explanation of data collection methodology, sample representation, data analysis, and a summary of the findings from the data analysis.

Data Collection

Participant Selection

Walden University IRB approved this study on July 10, 2023 (# 07-10-23-0745931). I began collecting data on 07/10/2023. I sought BIPOC participants who were residents of East Baton Rouge Parish during the August 2016 flood and were at least 18 at the time of the survey. I emailed different religious organizations, Al-

Hablulmateen Islamic Center, Unified Jewish Congregation of Baton Rouge, Tam Bao Meditation Center, Rose Hill Missionary Baptist, and Datta, to disperse almost all their members. Also, emails were sent to Open Health Care Clinic and CareSouth healthcare facilities to disperse amongst their patients. The study's flyer was also shared on my personal Facebook, Instagram, Twitter, and LinkedIn profile. Specific Facebook groups allowed me to post to their pages: Baton Rouge Happening, Louisiana SGRhos, Black Therapists of Southeastern Louisiana, and The Great Flood of Louisiana-2016. A Facebook page was created to invite qualified participants to take the survey. Lastly, personal contacts distributed the survey through their networks.

Demographics

All 71 participants identified as residents of East Baton Rouge Parish during the August 2016 flood. The majority of the study's participants were females 79.2 % (*n*=57) and males representing 19.4 % (*n*=14). These results suggest a substantial overrepresentation of females compared to males.

Table 1

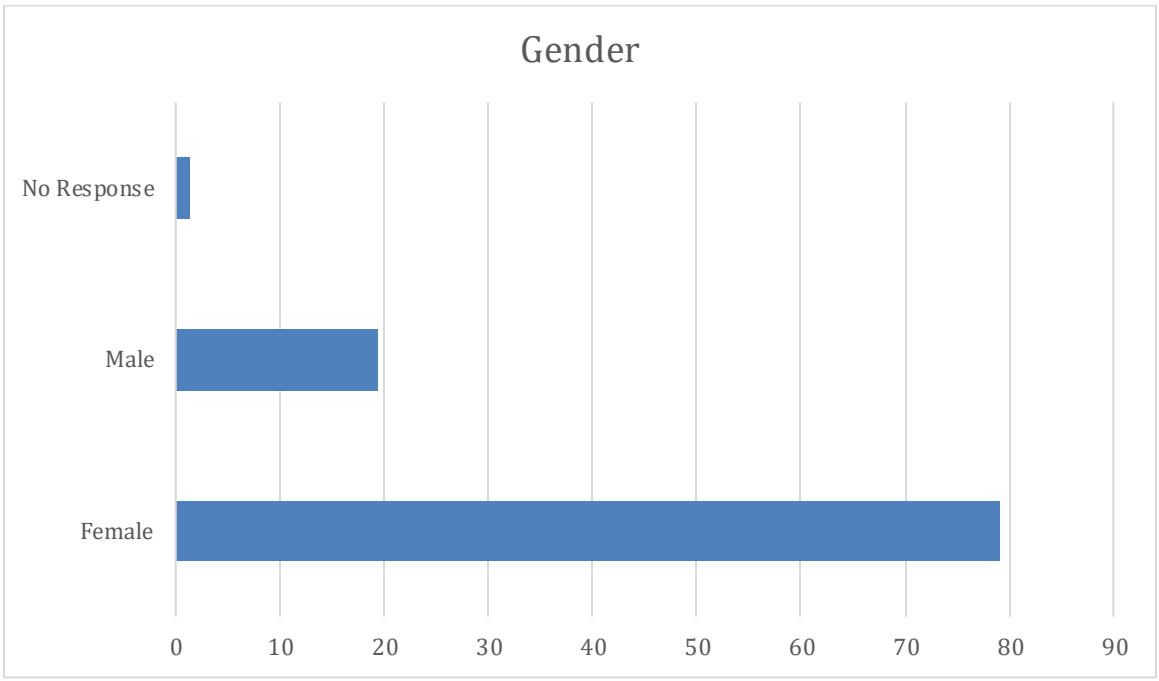
Gender Distribution of Respondents

What is your gender?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Female	57	79.2	79.2	79.2
	Male	14	19.4	19.4	98.6
	Response	1	1.4	1.4	100.0
	Total	72	100.0	100.0	

Figure 1

Gender Distribution of Respondents



The marital status of respondents were as follows: 45.1% single and never married, 28.2% married, 12.7% divorced, 8.5% cohabiting with a significant other partnership, 4.2% widowed, and 1.4% separated.

Table 2

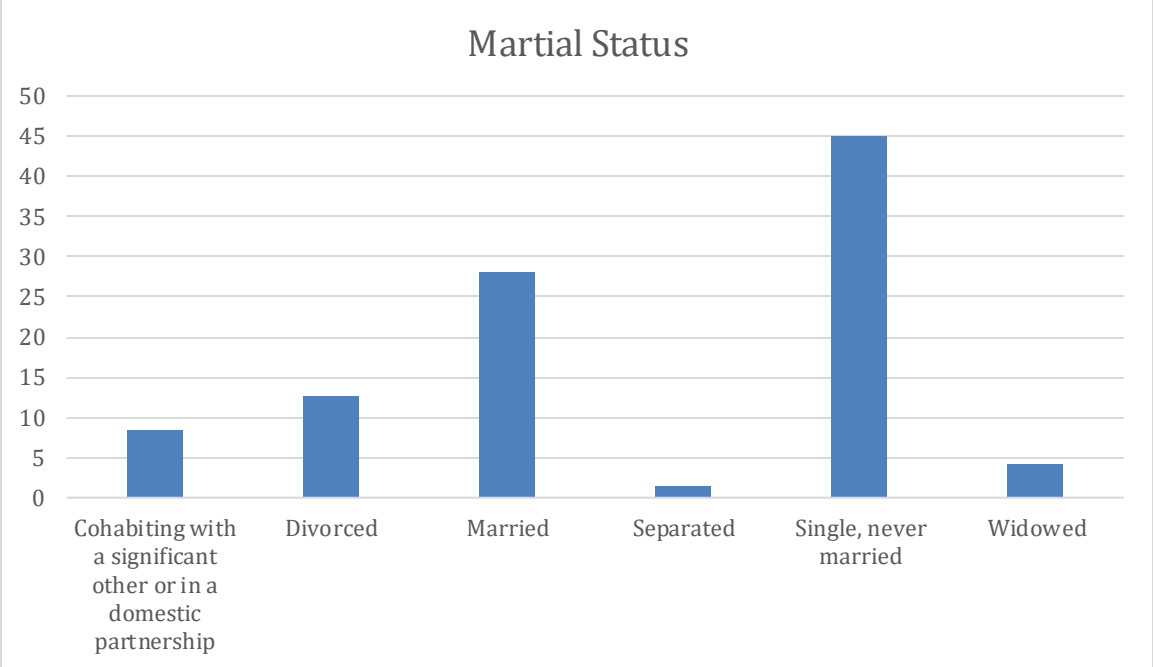
Marital Status of Respondents

Which of the following best describes your current relationship status?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Cohabiting with a significant other or in a domestic partnership	6	8.5	8.5	8.5
	Divorced	9	12.7	12.7	21.1
	Married	20	28.2	28.2	49.3
	Separated	1	1.4	1.4	50.7
	Single, never married	32	45.1	45.1	95.8
	Widowed	3	4.2	4.2	100.0
	Total	71	100.0	100.0	

Figure 2

Marital Status of Respondents



Of the 71 participants, an overwhelming majority identified as Black or African American, representing 97.2% of the sample. One respondent, accounting for 1.4%, indicated being of another race or ethnicity, with an option to describe it

further. Additionally, another respondent (1.4%) reported being multiracial or multiethnic.

Table 3

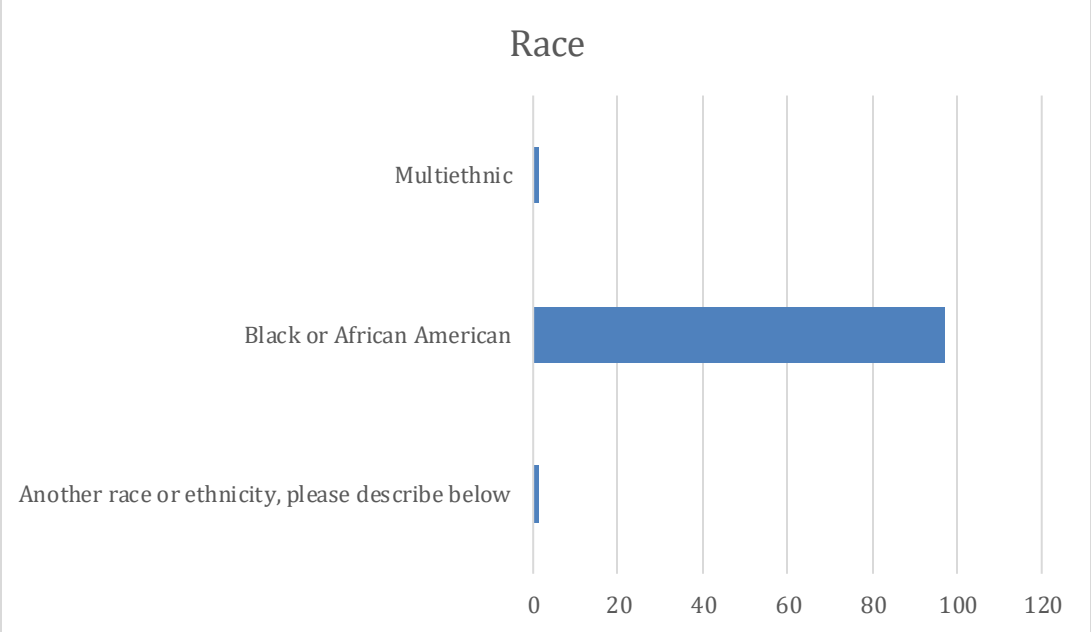
The Racial Distribution of Respondents

What is your race or ethnicity?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	For another race or ethnicity, please describe below	1	1.4	1.4	1.4
	Black or African-American	69	97.2	97.2	98.6
	Multiracial or Multiethnic	1	1.4	1.4	100.0
	Total	71	100.0	100.0	

Figure 3

The Racial Distribution of Respondents



Respondents commonly reported that religious affiliation was “Christianity,” with 56.3% of the sample identifying as such. Within this category, there were a few

variations, including one respondent who identified as “Christianity, Baptist” (1.4% of the sample) and another who specified they did not identify with Christianity until 2021 but would have checked “no religion” at the time of the flood (1.4%). The next most common religious affiliation was “No religion,” with 14.1% of respondents reporting this status. Other notable religious affiliations included “Catholicism” (8.5%), “Inter/Non-denominational” (4.2%), and “Baptist” (4.2%). There were also smaller categories, such as “Islam” (1.4%), “Protestantism, Christianity” (1.4%), and “Protestantism, Judaism, Islam” (1.4%).

Table 4

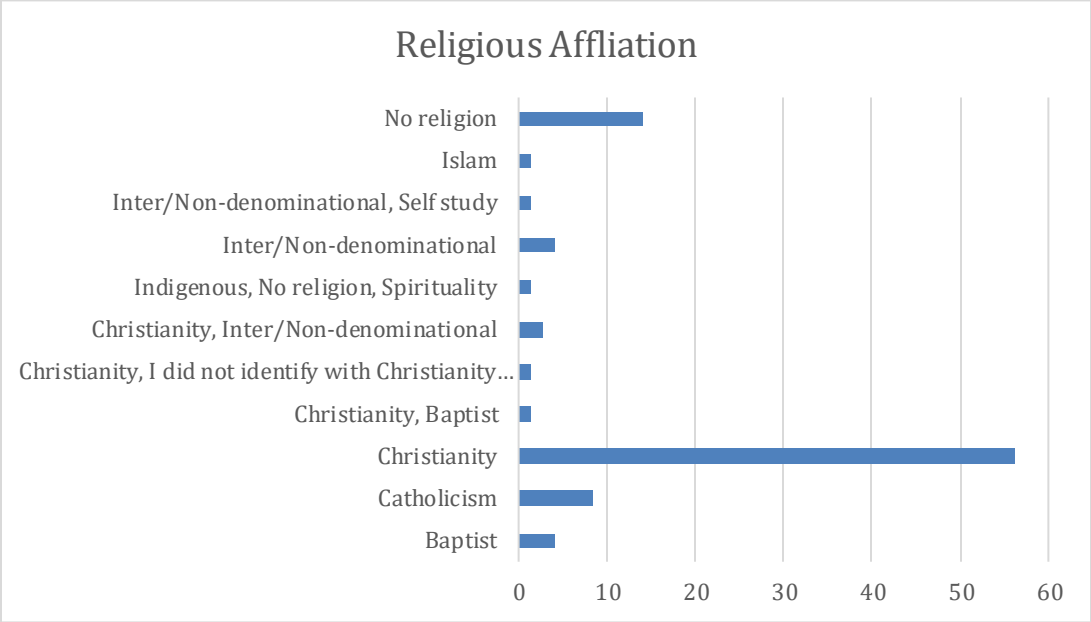
Religious Affiliation of Respondents

Do you identify with any of the following religions?

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Baptist	3	4.2	4.2	4.2
	Catholicism	6	8.5	8.5	12.7
	Christianity	40	56.3	56.3	69.0
	Christianity, Baptist	1	1.4	1.4	70.4
	Christianity I did not identify with Christianity until 2021; at the time of the flood, I would have checked no religion	1	1.4	1.4	71.8
	Christianity, Inter/Non-denominational	2	2.8	2.8	74.6
	Indigenous, No religion, Spirituality	1	1.4	1.4	76.1
	Inter/Non-denominational	3	4.2	4.2	80.3
	Inter/Non-denominational, Self-study	1	1.4	1.4	81.7
	Islam	1	1.4	1.4	83.1
	No religion	10	14.1	14.1	97.2
	Protestantism, Christianity	1	1.4	1.4	98.6
	Protestantism, Judaism, Islam	1	1.4	1.4	100.0
	Total	71	100.0	100.0	

Figure 4

Religious Affiliation of the Respondents



Results

This study aimed to examine the relationship between religious/spiritual beliefs and social support systems on PTG following the August 2016 flood in East Baton Rouge Parish. This study aimed to determine if PTG was observably increased or decreased by social support and religious/spiritual beliefs. This study consisted of two independent variables: social support measured by the *MSPSS* and religious/spiritual beliefs measured by the *Brief RCOPE*. This study had one identified dependent variable, PTG, measured by *PTGI-SF*.

Descriptive Statistics

The Brief RCOPE (Independent Variable 1)

The *Brief RCOPE* variable, representing religious coping, had 71 valid responses. The minimum score observed was approximately 0.8824, indicating that some respondents engaged in relatively low levels of religious coping. In contrast, the

maximum score of around 4.0588 suggests that others used religious coping strategies more extensively. On average, respondents had a mean *Brief RCOPE* score of approximately 2.2088, reflecting a moderate level of religious coping. The standard deviation of approximately 0.7354 suggests relatively low variability in religious coping scores compared to the other variables, indicating that most respondents fell within a similar range in their use of religious coping strategies.

Multidimensional Scale of Perceived Social Support (Independent Variable 2)

On the *Multidimensional Scale of Perceived Social Support* (*MSPSS*), again, there were 71 valid responses. The minimum score observed was 0, indicating that some respondents may have perceived very low levels of social support, while the maximum score of 5.0000 suggests that others perceived strong social support. On average, respondents had a mean M*SPSS* score of approximately 2.4085, reflecting a moderate level of perceived social support. The standard deviation of approximately 1.5013 indicates some variability in how respondents perceived social support, with some individuals reporting significantly higher levels than others.

Posttraumatic Growth Inventory Short Form (Dependent Variable)

For *the Posttraumatic Growth Inventory Short Form* (*PTGI-SF*), there were 71 valid responses. The minimum score observed was approximately 1.0833, indicating that some respondents reported relatively low levels of posttraumatic growth, while the maximum score was around 6.9167, suggesting that others experienced significantly higher levels of posttraumatic growth. On average, respondents had a mean *PTGI-SF* score of approximately 5.5211, reflecting a moderate level of posttraumatic growth. The standard deviation of approximately 1.3457 implies some

variability in the responses, indicating that there was diversity in how respondents experienced posttraumatic growth following the event under investigation.

Table 5

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
PTGI-SF	71	1.0833	6.9167	5.521127	1.3456808
MSPSS	71	.0000	5.0000	2.408451	1.5012717
Brief RCOPE	71	.8824	4.0588	2.208782	.7354312
Valid *N* (listwise)	71				

Research Question 1

Research Question 1 was to examine the relationship between religious/spiritual beliefs (as measured by the *Brief RCOPE*; IV) and social support systems (as measured by *MSPSS*; IV) on PTG (as measured by *PTGI-SF*; DV) following the August 2016 flood in East Baton Rouge Parish.

Correlation Analysis

The correlation analysis examined the relationship between *PTGI-SF* and *MSPSS*. The Pearson correlation coefficient reveals a positive but weak correlation of 0.153. This indicates that individuals who report higher levels of posttraumatic growth also tend to report slightly higher levels of perceived social support. However, this correlation is not statistically significant, as the associated *p*-value is 0.202, exceeding the conventional significance level of 0.05.

The correlation between the *MSPSS* and the *Brief RCOPE* indicated a robust and statistically significant correlation coefficient of 0.638. This indicates a strong positive association between perceived social support and religious coping. In other

words, individuals who perceive higher levels of social support also tend to engage more in religious coping strategies, and vice versa. The low *p*-value of 0.000 confirms the statistical significance of this relationship at the 0.01 level, highlighting its reliability and strength.

Lastly, the correlation between *PTGI-SF* and the *Brief RCOPE* is positive but weak, with a coefficient of 0.150. Like the *PTGI-SF* and *MSPSS* correlation, individuals who report higher levels of posttraumatic growth may also engage slightly more in religious coping strategies. However, this correlation is not statistically significant like the former, with a *p*-value of 0.213.

Table 6

Correlation Analysis

	PTGI-SF	MSPSS	Brief RCOPE
PTGI-SF	1		
MSPSS	.153	1	
Brief RCOPE	.150	.638**	1

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

Regression Analysis

The Model Summary table shows that the regression model has a weak explanatory power. The *R*-value of 0.167 indicates that only 16.7% of the variation in the dependent variable is explained by the independent variables. The *R*-squared value of 0.028 is even lower, indicating that the model explains only 2.8% of the variance in

the dependent variable. The adjusted *R*-squared value is negative, which is unusual and suggests that the model is overfitting the data. The standard error of the estimate of 1.346 indicates a fair amount of variability between the predicted and observed values of the dependent variable.

Table 7

Model Summary

Model	*R*	*R* Square	Adjusted *R* Square	Std. Error of the Estimate
1	.167[a]	.028	-.001	1.3460381

a. Predictors: (Constant), Brief RCOPE, MSPSS

Based on the results of the ANOVA table, the regression model assessing the impact of religious/spiritual beliefs (*Brief RCOPE)* and social support systems (*MSPSS*) on posttraumatic growth (*PTGI-SF*) does not yield statistically significant results. The F-statistic for the regression model is 0.981, and its associated *p*-value (Sig.) is 0.380. Since the *p*-value is greater than the conventional significance level of 0.05, we fail to reject the null hypothesis (H0) and do not find sufficient evidence to support the alternative hypothesis (H1).

The research question and hypotheses of the study were:

RQ1- Quantitative: To what extent do religious/spiritual beliefs (as measured by The *Brief RCOPE*) and social support systems (as measured by the *Multidimensional Scale of Perceived Social Support* (*MSPSS*) have on posttraumatic growth (as measured by *Posttraumatic Growth Inventory Short Form* (*PTGI-SF)?*

H_0: Flood survivors who have religious/spiritual beliefs and social support systems identify as having no posttraumatic growth as evidenced by the *Posttraumatic Growth Inventory Short Form* (*PTGI-SF*),

H_1: Flood survivors who have stronger religious/spiritual beliefs and social support systems identify as having increased posttraumatic growth as evidenced by *Posttraumatic Growth Inventory Short Form* (*PTGI-SF*). Based on the ANOVA results, the data do not provide sufficient evidence to conclude that religious/spiritual beliefs and social support systems, as measured by *Brief RCOPE* and *MSPSS*, have a significant impact on posttraumatic growth, as measured by *PTGI-SF*, among flood survivors.

Table 8

ANOVA

Model		Sum of Squares	*df*	Mean Square	F	Sig.
1	Regression	3.556	2	1.778	.981	.380[b]
	Residual	123.204	68	1.812		
	Total	126.760	70			

a. Dependent Variable: *PTGI-SF*

b. Predictors: (Constant), *Brief RCOPE, MSPSS*

Open-Ended Responses

At the end of the survey, participants could respond to two open-ended questions. The first open-ended question was: Are there any other factors that assisted you in coping after the flooding event that were not mentioned in this study? Many responses were left blank or responded no. For individuals who left other responses,

they are as follows: “My background and expertise,” “God’s love for everyone,” “Reading and meditating,” and “Identifying with others who were also experiencing the same level of discomfort that I was.”, “Prayers and faith.”

> The water was very high, and we had to get out. As I watched the news, I saw neighbors on the news saying that they had lost everything. I saw one end of my street completely underwater. So, in my mind, I felt that I had lost everything. I began calling my insurance company. However, glory to God 🙌 when I returned home, I was one of 5 houses that did not get water.

Continued responses included: “Family and funding from FEMA.” “The generosity of people that I did not know during this difficult time was extremely uplifting and joyous.”, “I handled the crisis as I have done throughout my life. I focused on Jesus, knowing it would all work out for my good. I am grateful to say, yes, it did! 🎉🎉”, “I was a support for others. I was minimally affected.”, “Staying connected to others and helping others that needed it.”, “Prayed and fasted more,” “I spent hours on FaceTime with friends who wanted to keep me company,” “Faith and listening to the proper authorities,” “Faith and listening to the proper authorities,” “Journaling my thoughts and feelings,” “Music and writing.” “As neighbors, we checked in with each other before, during, and after.”, “The help of Christian churches and FEMA,” “Prayers,” and “I saw the flood as a time to help others with their transition since I was not directly affected by the flood.”

The second open-ended question was: Any additional thoughts you want to share? Most participants did not answer the question or responded no, not at this time, or NA. For those participants who responded, they left the following: “My faith has always been strong 8n the Heavenly Father; therefore, I did not seek him because of a

flood which caused a great tragedy." "God is so good. I have more than I had before. ",

> I was pregnant at the time of the flood. I was also an elementary school teacher. The flood gave me more time to adapt to being pregnant because I would have really bad morning sickness. I found positive in the situation. When it was time to return to the classroom, I trusted Avid to provide the energy and strength to get my students back on track. It was tough, but I never questioned God.

Additional responses included: "The flood and so many other experiences help me answer this survey.", 'I would like the people of the world to take climate change seriously and do whatever it takes to take care of our planet.",

> This was a me and Jesus journey. It was not about others. I depend on God to supply my needs. He did it because most STRANGERS restored and provided for us on this journey. God always makes a way for His people. I am a witness! 💐💐

"I was in Baton Rouge during the time of the flood, but I do not believe I went through any trauma due to it. My house was undisturbed, and I was not involved in any rebuilding efforts for safety reasons because I was quite young." "I was not that affected by the flood.", "Thank you! I wish you the best in your endeavors." "I had just moved to Baton Rouge alone in February 2016. I was blessed to have food, water, and electricity. I lived on the first floor and was blessed not to have water enter my apartment or vehicle.".

Summary

In this chapter, I discussed the statistical analysis used to answer the research question and provided a rationale for those results. For the research question examined in this study, the data does not conclude that R/S beliefs (as measured by the *Brief RCOPE*)) and social support systems (as measured by the *MSPSS*) have a significant impact on PTG (as measured by *PTGI-SF*), among flood survivors of the August 2016 flood. I failed to reject the null hypothesis (H0) and found insufficient evidence to support the alternative hypothesis (H1). In Chapter 5, I will discuss my interpretation of the findings, study limitations, recommendations for future research, methodological implications, social change implications, and conclusions.

Chapter 5: Discussion, Conclusions, and Recommendations

Introduction

This quantitative study aimed to assess the relationship between religious/spiritual beliefs and social support systems on PTG following the August 2016 flood in East Baton Rouge Parish. In Chapter 5, I will include a summary of the research and a summary of the findings from Chapter 4. Also, I will discuss the significant findings from the previous literature review and explain the limitations of this study. This chapter concludes with future recommendations and implications for social change.

Interpretation of the Findings

There were 72 participants who completed the demographic questionnaire, the *Brief RCOPE, MSPSS,* and *PTGI-SF*. In total, there were 90 respondents; 19 did not complete the survey and were not included in the final analysis. The 71 final participants met all the criteria outlined in Chapter 3.

Research Question 1

RQ1: To what extent do religious/spiritual beliefs (as measured by *The Brief RCOPE*) and social support systems (as measured by the *MSPSS*) have on posttraumatic growth (as measured by *PTGI-SF*)?

I chose to focus this study on the effects of R/S beliefs and social support on PTG based on the increasing natural hazards worldwide. Previous research has examined these same variables in different countries (Azizzadeh Forouzi et al., 2018; Boullion et al., 2020; Garcia et al., 2014; Mesidor et al., 2018). I noticed that studies focused on the August 2016 flood in Louisiana, and there was a lack of research on

the BIPOC communities. Furthermore, I wanted to identify how vulnerable populations overcame hardships following the flooding event.

I hypothesized that individuals with stronger R/S beliefs and social support systems would have increased posttraumatic growth. After completing the data analysis for RQ1, I observed that there was not a statistically significant positive correlation between R/S belief and social support systems and PTG. However, individuals with higher levels of PTG reported higher levels of perceived social support. As well as individuals that engage in more religious coping skills tend to have higher levels of PTG. The correlation between *MSPSS* and the *Brief RCOPE* also indicated a strong positive association between perceived social support and religious coping. Individuals who perceived higher levels of social support also tend to engage more in religious coping strategies, and vice versa.

Seeking support following a disaster is common for survivors (Mesidor & Sly, 2019). Previous studies show that perceived social support impacts PTG (Garica et al., 2014). Perceived support can come from family, friends, and community (Mesidor & Sly, 2019). Several natural hazards have found a positive correlation between social support and PTG (Azizzadeh Forouzi et al., 2018; Boullion et al., 2020; Garcia et al., 2014). Bouillion et al. (2020) support that building social support during a natural disaster may increase PTG. The support others receive promotes a positive adjustment experienced following a natural hazard (Bouillion et al., 2020). PTG is higher in individuals with social support than religious coping (Bouillion et al., 2020; Garica et al., 2014).

This study did not find any significance between R/S beliefs and PTG. Other studies have shown a positive correlation between the two. Garcia et al. (2014) found

that PTG has beneficial effects when associated with positive religious coping. Some individuals with higher religious beliefs tend to have a more positive perception of negative events throughout their lives (Azizzadeh Forouzi et al., 2018). Mesidor and Sly's (2019) study found that positive religious coping was a better predictor of PTG than social support. Individuals who engage in positive and negative religious coping encompass the ability of PTG (Mesidor & Sly, 2019).

Limitations of the Study

The participants were limited to BIPOC survivors of the East Baton Rouge Parish in 2016. Participants had to be at least 18 years old during the survey. There were no limitations on religious or spiritual beliefs or gender. While there were no limitations for R/S beliefs or gender, most respondents for this study were African-American Christian females. The demographics limitation was East Baton Rouge Parish. The 2016 flood did impact other areas of Louisiana, but I chose to use East Baton Rouge Parish due to my access to the participants. This study was limited to the BIPOC community of EBR. Previous studies conducted in Louisiana reported that many respondents were white in ethnicity (Dispenza et al., 2019). To ensure that other racial and ethnic groups were represented in this study, I focused on the BIPOC population. The BIPOC participants represent most of the racial and ethnic makeup of the East Baton Rouge Parish. As mentioned, this study did not explore participants' previous experiences with natural disasters or traumas outside of the 2016 flooding event.

Recommendations

Current and previous research has enacted the connection between PTG, social support, and religious beliefs. Although this study provides insight into the

relationship of PTG of survivors of the 2016 flood, most respondents for the study were African American, Christian, and female. Previous studies have reported that most respondents have also been Christians (Boullion et al., 2020; Dispenza et al., 2019). Based on time constraints, lack of community partnerships, and access to vulnerable populations, additional focus, and advertisement should be given to the BIPOC male population. This study could be replicated for the BIPOC male population and other R/S beliefs in East Baton Rouge Parish to better understand their experience following the flooding event.

Additionally, I recommend conducting the study in other Louisiana areas impacted by the August 2016 flood. The August 2016 flood affected many smaller cities and parishes. While they may not have gone through the unique challenges of the summer before the flooding event in Baton Rouge, it would provide insight into what factors assisted survivors in overcoming the events of August 2016.

Implications

Positive Social Change

The positive social change implications for this study will bring awareness to vulnerable BIPOC flood survivors that may be overlooked during times of disaster. The results from the study reveal how using social support from family, friends, and community can make a difference in how survivors can see a positive mental health change following disasters. It highlights the need for community leaders to encourage their residents. Learning from the experiences of survivors can provide valuable insight on how to inform future training of mental health professionals and government officials in charge of emergency preparedness.

Flooding affects all aspects of a community. Flooding affects everyone regardless of race, ethnicity, education, or status. Equal opportunities should be afforded to those communities that are overlooked or underfunded following a disaster. Looking at the vulnerable population of Baton Rouge, additional care should be paid attention to if another massive disaster takes place. Local officials can look at having more people in North Baton Rouge to educate residents about the available resources. Many participants leaned into their faith and church family to assist them through the rebuilding process. Local officials could reach out to community churches to ensure that the resources effectively reach the population. Additionally, securing more grant money to get low-income people back into the community's businesses impacted by the disaster. All communities should be able to rebuild together by advancing equality across the nation.

Social support is another concept that can help a community strives toward a positive outcome. A friend's support can assist a person in overcoming some of the toughest hardships they have ever faced. A friend can lend a helping hand, both physically and emotionally. An individual providing support can be a listening ear, allow a safe place for them to voice their true emotions, assist in providing tangible resources, and keep them encouraged. Local officials can assist the community in coming together following a disaster.

Methodological Implication

Studies examining natural hazards often lack longitudinal methodology (Boullion et al., 2020). Longitudinal studies provide insight into how survivors respond to disasters over a significant amount of time. Using longitudinal studies, researchers can identify a baseline of mental health symptoms, PTG, resilience, social

support, and religious coping for survivors of natural hazards (Boullion et al., 2020). Additionally, by getting more insight into PTG and posttraumatic stress, researchers can get a better trajectory on the duration and onset of symptoms following a natural hazard (Boullion et al., 2020; Cohen et al., 2008). The lack of longitudinal studies may be due to the lack of extensive studies due to resources or partnerships (Hudson et al., 2020). For researchers in the future who may invest in doing a longer study, community partnerships would be beneficial to see more accurate results of what survivors experience during and after natural disasters.

Recommendation for Practice

There has been a lack of mental health preparedness, prompting the need for social support for the citizens of Louisiana. The state lists several vital resources on its emergency preparedness website (GOHEP, n.d.). Several disaster hotlines, such as the Disaster Distress Hotline, are available for survivors during recovery (SAMSHA, 2022). It took much research to access the document. If these resources are unknown or difficult to find, how can survivors and their support system reach this vital support? Louisiana can easily list these mental health resources on its websites and documents for easy access. That way, residents of Louisiana can review preparedness documentation and have access to possible mental health resources following the disaster. Additionally, working with community partners to have these resources ready to share within their neighborhoods following a disaster allows easier access.

Lastly, Louisiana would benefit from partnering with local community mental health agencies. These agencies are usually the direct providers to members of the community that are impacted by natural disasters. The evidence-based program Psychological First Aid (PFA) is effective in conjunction with social support to assist

survivors in recovering from disasters (Hambrick et al., 2014). Local government could donate money to mental health agencies to train in PFA. With PFA training and social support, mental health agencies can assist communities impacted by disasters with a more positive adjustment and reduced mental health symptoms (Boullion et al., 2020).

Conclusion

This study aimed to explore the relationship between religious/spiritual beliefs and social support systems on BIPOC persons' PTG following the August 2016 flood in East Baton Rouge Parish. This vulnerable population deserves any additional assistance following a natural hazard. The issue of flooding is not going away. As the years continue, the flooding problems worldwide continue to grow something that requires physically and emotionally preparedness of communities for the toll flooding can take on their lives. The results of this study show how social support and religious/spiritual beliefs can increase PTG following a natural disaster. It is important to continue to gain additional scientific knowledge to understand further how these protective factors assist survivors in overcoming natural hazards. This study will bring about social change and inspire communities impacted by natural disasters to improve their responses to survivors' mental health needs.

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Appendix A: Multidimensional Scale of Perceived Social Support

Multidimensional Scale of Perceived Social Support

Instructions: We are interested in how you feel about the following statements. Read each statement carefully. Indicate how you feel about each statement.

Circle the "1" if you **Very Strongly Disagree**
Circle the "2" if you **Strongly Disagree**
Circle the "3" if you **Mildly Disagree**
Circle the "4" if you are **Neutral**
Circle the "5" if you **Mildly Agree**
Circle the "6" if you **Strongly Agree**
Circle the "7" if you **Very Strongly Agree**

		Very Strongly Disagree	Strongly Disagree	Mildly Disagree	Neutral	Mildly Agree	Strongly Agree	Very Strongly Agree
1.	There is a special person who is around when I am in need.	1	2	3	4	5	6	7
2.	There is a special person with whom I can share joys and sorrows.	1	2	3	4	5	6	7
3.	My family really tries to help me.	1	2	3	4	5	6	7
4.	I get the emotional help & support I need from my family.	1	2	3	4	5	6	7
5.	I have a special person who is a real source of comfort to me.	1	2	3	4	5	6	7
6.	My friends really try to help me.	1	2	3	4	5	6	7
7.	I can count on my friends when things go wrong.	1	2	3	4	5	6	7
8.	I can talk about my problems with my family.	1	2	3	4	5	6	7
9.	I have friends with whom I can share my joys and sorrows.	1	2	3	4	5	6	7
10.	There is a special person in my life who cares about my feelings.	1	2	3	4	5	6	7
11.	My family is willing to help me make decisions.	1	2	3	4	5	6	7
12.	I can talk about my problems with my friends.	1	2	3	4	5	6	7

Appendix B: Permission to use MSPSS

From: Zimet, Gregory D <gzimet@iu.edu>
Date: Friday, December 2, 2022 at 6:52 PM
To: Danielle Lee <danielle.lee5@waldenu.edu>
Subject: RE: Seeking Permission to use MSPSS

Dear Danielle Lee,

You have my permission to use the Multidimensional Scale of Perceived Social Support (MSPSS) in your research. I have attached a copy of the scale (with scoring information on the 2nd page), a document listing several of the articles that have reported on the reliability and validity of the MSPSS, and a chapter that I wrote about the scale.

I hope your research goes well.

Best regards,
Greg Zimet

Gregory D. Zimet, PhD, FSAHM
Professor of Pediatrics & Clinical Psychology
Co-Director, IUPUI Center for HPV Research
Division of Adolescent Medicine | Department of Pediatrics
Pronouns: He/Him/His

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Web Pages:
https://medicine.iu.edu/faculty/2816/zimet-gregory
https://medicine.iu.edu/pediatrics/specialties/adolescent-medicine/research/hpv

From: Danielle Lee <danielle.lee5@waldenu.edu>
Sent: Friday, December 2, 2022 11:36 AM
To: Zimet, Gregory D <gzimet@iu.edu>
Subject: [External] Seeking Permission to use MSPSS

Dear Dr. Zimet,

I am a doctoral student from Walden University writing my dissertation titled *The effects of spirituality and social support on trauma in BIPOC communities following the* August 2016 flooding event in Baton Rouge, LA, under the direction of my dissertation committee chaired by Dr. Victoria Sepulveda who can be reached at victoria.sepulveda@mail.waldenu.edu. The Walden University IRB can be contacted at irb@mail.waldenu.edu.

I would like your permission to use The Multidimensional Scale of Perceived Social Support instrument in my research study. I would like to use and print your survey under the following conditions:

- I will use the surveys only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If you do not control the copyright for these materials, I would appreciate any information you can provide concerning the proper person or organization I should contact.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail at Danielle.Lee5@waldenu.edu.

Sincerely,

Danielle Lee, LPC-S
Doctoral Student at Walden University

Appendix C: Posttraumatic Growth Short Form

Responses are made on the following six-point scale:

0= I did not experience this change as a result of my crisis.

1= I experienced this change to a very small degree as a result of my crisis.

2= I experienced this change to a small degree as a result of my crisis.

3= I experienced this change to a moderate degree as a result of my crisis.

4= I experienced this change to a great degree as a result of my crisis.

5= I experienced this change to a very great degree as a result of my crisis.

	Circle your choice					
1. I changed my priorities about what is important in life.	0	1	2	3	4	5
2. I have a greater appreciation for the value of my own life.	0	1	2	3	4	5
3. I am able to do better things with my life.	0	1	2	3	4	5
4. I have better understanding of spiritual matters.	0	1	2	3	4	5
5. I have a greater sense of closeness with others.	0	1	2	3	4	5
6. I established a new path for my life.	0	1	2	3	4	5
7. I know better that I can handle difficulties.	0	1	2	3	4	5
8. I have a stronger religious faith.	0	1	2	3	4	5
9. I discovered that I'm stronger than I thought I was.	0	1	2	3	4	5
10. I learned a great deal about how wonderful people are.	0	1	2	3	4	5

Appendix D: Permission to use PRGI-SF

From: Arnie Cann <acann48@gmail.com>
Date: Wednesday, December 21, 2022 at 10:50 AM
To: Danielle Lee <danielle.lee5@waldenu.edu>
Subject: Re: [EXTERNAL] Re: Seeking Permission to use PRGI-SF

Danielle,

Sorry for the delay. You are most welcome to use the PTGI-SF in your research. We are always happy to share our PTG-related measures with other researchers.

Arnie

On Wed, Dec 21, 2022 at 11:45 AM Danielle Lee <danielle.lee5@waldenu.edu> wrote:
Good Morning,

I was following up on the initial email I sent a few weeks ago. I was hoping to use the Posttraumatic Growth-Short form instrument for my dissertation on *the effects of spirituality and social support on trauma in BIPOC communities following the August 2016 flooding event in Baton Rouge, LA.*

If I could obtain your permission, it would be greatly appreciated.

Sincerely,
Danielle

Doctoral Student at Walden University

From: Danielle Lee
Sent: Friday, December 2, 2022 10:40 AM
To: acann@uncc.edu <acann@uncc.edu>
Subject: Seeking Permission to use PRGI-SF

Dear Dr. Cann,

I am a doctoral student from Walden University writing my dissertation titled *The effects of spirituality and social support on trauma in BIPOC communities following the* August 2016 flooding event in Baton Rouge, LA, under the direction of my dissertation committee chaired by Dr. Victoria Sepulveda who can be reached at victoria.sepulveda@mail.waldenu.edu. The Walden University IRB can be contacted at irb@mail.waldenu.edu.

I would like your permission to use Posttraumatic Growth -Short form instrument in my research study. I would like to use and print your survey under the following conditions:

- I will use the surveys only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If you do not control the copyright for these materials, I would appreciate any information you can provide concerning the proper person or organization I should contact.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail at Danielle.Lee5@waldenu.edu.

Sincerely,

Danielle Lee, LPC-S

Doctoral Student at Walden University

Appendix E: Brief RCOPE

1 – not at all
2 – somewhat
3 – quite a bit
4 – a great deal

(+) l.	Looked for a stronger connection with God.	1	2	3 4
(+) 2.	Sought God's love and care.	1	2	3 4
(+) 3.	Sought help from God in letting go of my anger.	1	2	3 4
(+) 4.	Tried to put my plans into action together with God.	1	2	3 4
(+) 5.	Tried to see how God might be trying to strengthen me in this situation.	1	2	3 4
(+) 6.	Asked forgiveness for my sins.	1	2	3 4
(+) 7.	Focused on religion to stop worrying about my problems.	1	2	3 4
(-) 8.	Wondered whether God had abandoned me.	1	2	3 4
(-) 9.	Felt punished by God for my lack of devotion.	1	2	3 4
(-) 10.	Wondered what I did for God to punish me.	1	2	3 4
(-) 11.	Questioned God's love for me.	1	2	3 4
(-) 12.	Wondered whether my church had abandoned me.	1	2	3 4
(-) 13.	Decided the devil made this happen.	1	2	3 4
(-) 14.	Questioned the power of God.	1	2	3 4

(+) Positive religious coping item
(-) Negative religious coping item

Appendix F: Permission to use Brief RCOPE

Dear Danielle:

You have my permission to use the Brief RCOPE. Please keep me posted on your findings.

Sincerely,

Kenneth I. Pargament, Ph. D.
Professor Emeritus
Department of Psychology
Bowling Green State University
Bowling Green, OH 43403

Author (with Julie Exline), *Working with Spiritual Struggles in Psychotherapy: From Research to Practice*, Guilford Press, 2022
Author, *Spiritually Integrated Psychotherapy: Understanding and Addressing the Sacred*, Guilford Press, 2007
Editor-in-Chief, *APA Handbook of Psychology, Religion, and Spirituality* (Vols. 1 and 2), APA Press, 2013
www.kennethpargament.com

From: Danielle Lee <danielle.lee5@waldenu.edu>
Sent: Friday, December 2, 2022 12:33 PM
To: Kenneth I Pargament <kpargam@bgsu.edu>
Subject: [EXTERNAL] Seeking Permission to Use The Brief RCOPE

Dear Dr. Pargament,

My name is Danielle Lee. I am a doctoral student from Walden University writing my dissertation titled *The effects of spirituality and social support on trauma in BIPOC communities following the August 2016 flooding event in Baton Rouge, LA,* under the direction of my dissertation committee chaired by Dr. Victoria Sepulveda who can be reached at victoria.sepulveda@mail.waldenu.edu. The Walden University IRB can be contacted at irb@mail.waldenu.edu.

I would like your permission to use The Brief RCOPE instrument in my research study. I would like to use and print your survey under the following conditions:

- I will use the surveys only for my research study and will not sell or use it with any compensated or curriculum development activities.
- I will include the copyright statement on all copies of the instrument.
- I will send a copy of my completed research study to your attention upon completion of the study.

If you do not control the copyright for these materials, I would appreciate any information you can provide concerning the proper person or organization I should contact.

If these are acceptable terms and conditions, please indicate so by replying to me through e-mail at Danielle.Lee5@waldenu.edu.

Sincerely,

Danielle Lee, LPC-S

Doctoral Student at Walden University

Appendix G: Demographic Questionnaire

1. Were you a resident of East Baton Rouge Parish (Baton Rouge, Baker, Zachary, or Central) during the August 2016 flood?
Yes
No
2. What is your age?
Younger than 18
18 to 24
25 to 34
35 to 44
45 to 54
55 to 64
65 to 74
75 or older
3. What is your gender?
Female
Male
Other (specify)
4. Which of the following best describes your current relationship status?
Married
Widowed
Divorced
Separated
Cohabiting with a significant other or in a domestic partnership
Single, never married
Prefer not to answer
Self-describe below:
5. What is your race or ethnicity?
Asian
Black or African American
Hispanic or Latino
Middle Eastern or North African
Multiracial or Multiethnic
Native American or Alaska Native
Native Hawaiian or other Pacific Islander
White
Another race or ethnicity, please describe below
6. Do you identify with any of the following religions? (Please select all that apply.)
Protestantism
Catholicism
Christianity
Judaism
Islam
Buddhism
Hinduism
Native American
Inter/Non-denominational
No religion
Other (please specify)