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Post-Hurricane Sandy Coping Strategies and Resilience Factors Among People with Disabilities

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Dissertation Submitted in Partial Fulfillment

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Abstract

People with disabilities are likely to experience difficulties overcoming the impact of natural disasters. Few scholars have focused on this population's ability to recover and handle stress following a natural disaster. The purpose of this phenomenological study was to explore and describe coping strategies and resilience factors that people with physical or mental disabilities used in the aftermath of Hurricane Sandy. Resilience theory was used as the theoretical framework. Through face-to-face interviews, 10 persons with disabilities shared their experiences of coping and resilience. A lens of interpretative phenomenological analysis was used to identify emergent themes related to persons with disabilities' experiences of overcoming challenges and sustaining wellbeing in the aftermath of this natural disaster. According to study results, religion, recreation, and relaxation techniques were the main coping strategies used, and self-determination and independent skills were resilience factors that helped persons with disabilities remain positive and overcome challenges following the hurricane. Participants reported experiencing emotional reactions and identified the dislocation as the greatest stressor. The findings of this study have the potential to effect positive social change by informing stakeholders such as policy makers, community and state agencies, and related professionals to help them recognize and address the health and psychological needs of persons with disabilities following a hurricane. Knowing which coping strategies and resilience factors persons with disabilities use creates awareness of the positive ways in which persons with disabilities manage the aftermath of this natural disaster.

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Dedication

I dedicate this work to my *late grandmother Zeulia Musoka, late Joyce Musoke Njakasi, and Uncle Eliot Mutyaba who* took care of me throughout my childhood. To my special daughters Elise, Alexandra- Marie, and Eulalia *AKA Zeulia* Mukasa, and the best friend, father, and husband Elias, Mukasa.

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Chapter 1: Introduction to the Study

Hurricanes are natural disasters that tend to result in health hazards. The loss of lives ultimately leads to emotional distress among survivors and affects their welfare. According to Doherty and Clayton (2011), people with disabilities are affected differently when natural disasters occur because they need specific resources and emergency accommodations during evacuations, such as accessible transportation or first aide medical equipment. Often, these resources are not adequate to help this vulnerable population during disaster situations (Doherty & Clayton, 2011). In studies on previous hurricanes in the United States, scholars found that failure to accommodate the needs of persons with disabilities during Hurricanes Katrina and Rita was one of the main issues during and after these hurricanes hit (Litman, 2006). Therefore, unlike people with disabilities in caring facilities with resources, those in homes without resources received inadequate assistance due to decision makers who were inexperienced and insensitive to these people's needs (Bloodworth, Kevorkian, Rumbaut, & Chiou-Tan, 2007).

The purpose of this study was to explore and to describe coping strategies and resilience factors people with disabilities used in the aftermath of Hurricane Sandy. This study will add to an existing body of literature where researchers have explored how people cope and become resilient to stress and trauma caused by a natural disaster. Only a few scholars have focused on the importance of coping strategies and resilience factors among persons with disabilities following a natural disaster (Fox, White, Rooney, & Cahill, 2010). Rehnsfeldt and Arman (2012) asserted that resilience among people with disabilities in postdisaster events is a topic that needs additional research. Therefore, in this phenomenological study, I explored resilience factors and coping strategies among people with disabilities following a natural disaster. Resilience theory constituted the theoretical basis of this study (Taormina, 2015). Participants consisted of 10 adults who lived in New York City or one of its suburbs, were affected by Hurricane Sandy, and reported having a disability before the hurricane.

This chapter provides a general overview for understanding resilience and coping in the aftermath of a natural disaster. I outline the theoretical background for this study, leading to a discussion of the methodology that was chosen to explore the key concepts of this investigation. Fundamental terms are defined, and I described the study's assumptions, delimitations, and limitations as well as well as a discussion of the research's potential for creating positive social change and implications for social change.

Background of the Problem

People's separations from their belongings and networks arising from the exposure to natural disasters and displacement cause welfare setbacks, as well as disruptions to family and community networks (Haskett, Scott, Nears, & Grimmett, 2008). These setbacks may cause distress and lead to the onset of posttraumatic stress symptoms, which may require a person to learn how to survive and become flexible (Leytham & Powell, 2012; Zurbriggen, 2011).

The American Psychiatric Association (APA, 2013) identified posttraumatic stress disorder (PTSD) as persistent challenges related to response to stimuli, intense fear, elevated stimulation, persistent trouble with sleeping, and nightmares. Individuals with lower levels of resilience and coping strategies are more likely to have a higher likelihood of developing these symptoms and experience significant emotional distress resulting from PTSD symptoms, such as anxiety, avoidance, and hyperarousal (APA, 2013; Campfield & Hills, 2001; Freidenberg et al., 2012; Karam et al., 2014; Leytham & Powell, 2012; Mitchell et al., 2003).

Earlier theorists' perspectives of resilience suggested that a person's flexibility and survival skills are features that help that person overcome any experienced challenges and later attain good health (Wang, Zhang, & Zimmerman, 2015). This concept does not differ from the contemporary perspectives of the definition of resilience, which suggests that a person's strengths influence his or her ability to overcome experienced trauma (Braverman, 2001; James & Gilliland, 2013; Southwick, Bonanno, Masten, Panter-Brick, & Yehuda, 2014; Taormina, 2015; Welsh, 2014). On the other hand, coping involves managing and handling stress.

Folkman and Lazarus (1980) and Waitt (2015) asserted that a person's efforts to deal with distress are likely to depend on either problem-focused coping or emotionally focused based coping process. Similarly, researchers suggested that it is important for people to select coping strategies that correspond to their level of emotional distress following a disaster (Fahrudin, 2012; James & Gilliland, 2013; Leytham & Powell, 2012; Luszczynska, Benight, & Cieslak, 2009; Neria et al., 2008; Tracy, Norris, & Galea, 2011). An example of coping may include family and spiritual values, which are a significant influence on how people dealt with a natural disaster. Six months after a Tsunami, individuals who had access to backup system adjusted to better welfare, whereas people who remained in isolation experienced difficulties adjusting following a catastrophe (Lawson, 2010; Rehnsfeldt & Arman, 2012).

Gruebner, Lowe, Sampson, and Galea (2015) found that socioeconomic factors and family/community network were influencing factors of people' resilience for post disaster stress and trauma-related symptoms. In their study on Hurricane Sandy, Gruebner et al. also found that people's levels of education played a role in how people experienced posttraumatic stress following this hurricane.

Furthermore, a community's resilience is suggested to influence community improvement in major disaster threats, decrease the community's exposure to risk events, and respond to and recover from a disaster when it happens (Colten, Kates, & Laska, 2008). Colten et al. (2008) commended that a significant aspect of post disaster resilience is to build an ongoing community-wide assurance to respect all divisions of the community and be comprehensive in decision-making processes and resource distribution. These steps help to create hope in the development of the coming disaster. Powell and Leytham (2014) highlighted that individuals who experienced the 2011, 6.3-magnitude earthquake in Christchurch New Zealand with hope could recover and managed to deal with their experiences following this catastrophe. Because people with disabilities face challenges during the evacuation process, it is important to consider a system network that provides hope and safety to these people.

People with disabilities are at higher risk to be impacted with hurricanes; hence, flexibility and survival skills are more likely to facilitate people's ability to deal with hurricane aftermath stress and trauma (Doherty & Clayton, 2011; Fahrudin, 2012;

Haskett et al., 2008; James & Gilliland, 2013; Wu, Chen, & Yao, 2008; Zurbriggen, 2011).

Statement of the Problem

Scholars have looked at coping strategies and resilience factors among different populations, but only a few researchers focused on people's ability to recover and handle distress among people with disabilities following hurricanes (Fox et al., 2010; Mohey & Fobes, 2009; Svetina, 2014; Wagnild, 2009; White, Simon, &Warren, 2008). People with incapacities are among the vulnerable groups of people who are at greater risk of experiencing trauma following a disaster. Therefore, without flexibility and survival skills, these people are likely to experience difficulties overcoming the impact of a natural disaster. By exploring coping strategies and resilience factors following a natural disaster among people with disabilities, this study will have the potential to promote an emphasis on post hurricane supportive networks. Identifying coping strategies contributes to understanding how people overcome the impact of disaster experiences (Cohen, Meek, & Lieberman, 2010; Ferguson, Richie, & Gomez, 2004; Leytham & Powell, 2012; Rehnsfeldt & Arman, 2012; West, Stewart, Foster, & Usher, 2012).

Research Questions

1. What are the coping strategies and resilience factors people with disabilities used to recover from the Hurricane Sandy experience?
2. How did people with disabilities maintain their health and psychological well-being following Hurricane Sandy?

Purpose of the Study

At this stage in research, resilience and coping can be briefly defined as a person's strengths and abilities used in dealing with stress following a challenging situation (Renard &Snelgar, 2015; Southwick et al., 2014; Taormina, 2015; Wang et al., 2015; Wu et al., 2008). In this study, I explored and described coping strategies and resilience factors people with disabilities used in the aftermath of Hurricane Sandy.

Theoretical Framework

In this phenomenological study, I used the resilience theory as the theoretical framework. Resilience theory is a context for explaining emotional ways of handling stressful experiences (Welsh, 2015). The main principle of the theory is that a resilient person can promote encouraging feelings in him or herself to survive traumatic circumstances (Miller-Lewis, Searle, Sawyer, Baghurst, & Hadley; 2013; Svetina, 2014; Windle, 2011). Resiliency is related to a person's ability to bounce back from trauma, to preserve against depressive associated symptoms, and to maintain his or her adulthood when experiencing traumatic conditions (Wang et al., 2015).

According to resilience theory, people can use extended networks such as families, organizations, societies, and cultures to make changes in their lives after experiencing a traumatic event. These networks are likely to regulate how someone might regain stability following a stressful experience. Hence, these networks can aid in a person's recovery and improved emotional welfare (Southwick et al., 2014; Wang et al., 2015; Welsh, 2014).

Coping is the approach an individual use to deal with traumatic conditions, and with experience and practice, a person can attain and preserve desirable coping skills (Salloum & Lewis, 2010; Wang et al., 2015). Renard and Snelgar (2015) asserted coping as a factor used in understanding ways people adjust when faced with traumatic events. An example of this may be, people speaking with friends and family and engaging in spiritual support or other community resources following a natural disaster. These factors facilitate a person's ability to formulate a faster connection leading to healthy relationships and taking accountabilities in assuming family roles and health behaviors that are essential when coping with disaster-related stress and trauma (Afifi, Felix, & Afifi, 2012; Salloum & Lewis, 2010).

Resilient persons formulate helpful approaches for managing the emotional distress of disaster. The theory can be used to address people's strength and how resilience influences their ability to overcome difficulties experienced following Hurricane Sandy. For example, a person can engage with his or family or community activities and by doing so he or she maybe eliminating symptoms such as isolation or depressive symptoms that can result from this traumatic event (Renard & Snelgar, 2015; Salloum & Lewis, 2010; Welsh, 2014).

Nature of the Study

I used a phenomenological research approach to explore how adults with disabilities dealt with their experiences following Hurricane Sandy 5 years after. In this study, I focused on how adults with disabilities used resilience and coping skills as a mechanism to overcome their disaster experiences. The findings will help disaster crisis professionals understand the importance of exploring other interventions that may be assessed when working with people with disabilities following hurricanes.

Operational Definitions

The following are some of the terms used throughout the paper.

Adversity: A process of having trouble or challenges (Lawson, 2010).

Coping: It shows ways how a person deals with stress following a challenging situation (Renard & Snelgar, 2015; Wu et al., 2008). Coping involves thinking, responsive, and behavioral efforts an individual will use to deal with stressors and these depend on either problem-focused coping or emotional focused based on the coping (Folkman & Lazarus, 1980; Waitt, 2015).

Disability: According to the Americans with Disabilities Act 1990 (ADA), a person with a disability has a physical or mental impairment that limits to complete one or more major life activity (ADA, n.d.).

Distress: Undesirable feelings or reactions that influence a person's functionality. Hence, it is an emotional uneasiness that impedes a person's daily living activities or welfare (Waitt, 2015).

Natural disaster: It is "an overwhelming and distressing catastrophic event that impacts the individuals of a community/society" (Morrice, 2013, p. 34).

Resilience: **"**A process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress" (APA, 2014- para 4; Southwick et al., 2014, p. 2) or defined as a process of overcoming the negative effects of risk exposure, coping successfully with traumatic experiences, or avoiding the negative trajectories associated with risks" (Wang et al., 2015, p. 354)**.**

Stress: Struggle based on a person's demands and existing means that influence wellbeing, which later lead to a person feeling astounded and emotionally distressed (Waitt, 2015).

Trauma: Emotional distress that progresses after a person exposed to a traumatic or exceedingly stressful experience (APA, 2014).

Assumptions

I examined the resilience factors and coping strategies of people with disabilities 5 years after Hurricane Sandy. I assumed that people would respond voluntarily, openly, and honestly. This assumption turned out to be correct, in that the participants in this study voluntarily provided information based on their personal experiences during and following Hurricane Sandy and answered the questions openly and honestly. However, only two participants needed clarification of one of the questions posed to them during the interview.

I also had assumed that they would provide information based on their personal experiences during and following Hurricane Sandy and ask for clarification if they did not understand the questions; I further assumed that males would be more likely to hide their feelings and talk less about their experiences than females. The findings did not wholly support these assumptions; for example, men and women were forthcoming about their circumstances and required no prompts. Therefore, the emerged themes from the information obtained from the participants in this study should be used to improve what these survivors consider survival and coping strategies following hurricanes.

Limitations

This study was expected to be limited to people with disabilities, affected by Hurricane Sandy living in the New York City boroughs. I had anticipated barriers to identification of participants, but this was not an issue as several people were willing to share their experiences. However, some people were unable to travel to the designated location at the library. Nevertheless, it added more time to securing a noise-free place where people could not interrupt the interview. Eventually, I managed to meet these people at a safer and quieter neighborhood convenient to them. With this change to the data collection arrangement, I was able to meet all of the 10 participants who now live near the heavily hit areas where these people reside. I anticipated that there could be issues with participants' remembering details. In fact, one participant had difficulty recalling details of what had happened.

Scope and Delimitations

The results of this study were limited to people who were disabled before Hurricane Sandy. In this study, I explored the coping strategies and the resilience factors the people with disabilities used in recovering from the Hurricane experience and how people with disabilities sustained their health and psychological wellbeing following Hurricane Sandy. The sample population recruited 10 adults with disabilities who are over the age of 18 5 years post-Hurricane Sandy.

Significance of the Study

The findings resulted in some common coping skills and resilient factors that can be extrapolated to all persons with disabilities who have experienced similar disasters (hurricanes, tsunamis, wildfires, etc.). Determining these common areas would influence the development of programs that can help to educate others to prepare or at least think about future potential disasters, as well as assist professionals in crisis management to deal with and recognize what services or programs need to be put into place now and at the time of developing disaster.

Social Change Implications

The implications of social change focus on the influence of the disaster management systems to focus on service disaster delivery for people with disabilities, who might not present physical wounds, provide post disaster support services (Leytham & Powell, 2012). Hurricanes appear to cause a long-term negative impact on people's welfare. The study promotes the need to improve post disaster supply delivery and provide awareness related to positive ways of dealing with disaster aftermath among people with disabilities.

Summary

Researchers have documented the impact of natural disasters such as hurricanes on people's wellbeing. Researchers have discovered that a vulnerable group of people (ie., women, people with disabilities, elderly, and children) experience psychological issues because of natural disasters. In this study, I sought to explore the experiences of people with disabilities’ coping strategies and resilience factors following a disaster. The relevant literature is revised in Chapter 2.

Chapter 2: Literature Review

Introduction

Following the life transformations that occur in the wake of hurricanes or other natural disasters and emergencies, people with disabilities may be especially affected and face greater difficulties in adjusting to new settings or new roles in society. Ibañez Ibanez, Buck, Khatchikian, and Norris (2004) asserted that hurricanes tend to contribute to the stress people with disabilities experience, which affects their welfare and general wellbeing. Furthermore, stressful experiences of forced hurricane displacement can create negative outcomes that affect people's wellbeing and environment (James & Gilliland, 2013 Mak, Ng, & Wong, 2011). Following disasters, survivors are concerned with how to regain their former lives; therefore, further research is called to understand how resilience factors and coping mechanisms are used to restore their livelihoods among persons with disabilities (Ibanez et al., 2004; Rehnsfeldt & Arman, 2012).

The Federal Emergency Management Agency (FEMA, 2013) noted that the widespread flooding resulting from Hurricane Sandy resulted in energy deficiencies, damaged property, and loss of life throughout New York and the surrounding areas. In the immediate aftermath, approximately 8.5 million people were left without power (FEMA, 2013). People with disabilities are among the most vulnerable groups of people and are at greater risk of experiencing trauma following natural disasters (Leytham & Powell, 2012). Rehnsfeldt and Arman (2012) examined coping strategies and resilience factors among different populations and suggested that without strong determination, flexibility, and survival skills, people with disabilities who are victims of a natural disaster have a higher risk and a lower rate of recovering from psychological distress.

People who demonstrate resilience in a hurricane's aftermath have been shown to adequately use coping skills to address their emotional needs (Cohen et al., 2010; Ferguson et al., 2004; West et al., 2012). Given the research on coping strategies and resilience factors, few scholars have addressed people's ability to handle and to recover from challenges following hurricanes (Fox et al., 2010; Svetina, 2014; Wagnild, 2009; White et al., 2008). In this study, I explored coping strategies and resilience factors among persons with disabilities 5 years post-Hurricane Sandy.

Exploring resilience among people with disabilities following a hurricane is a research topic of importance for affected individuals, and additional exploration is required to understand how individuals cope (Rehnsfeldt & Arman, 2012). In this chapter, I provide a review of the literature associated with trauma and the traumatic stress-related experiences of natural disaster survivors, the effects of forced displacements, and other consequences of hurricanes. I examine how coping strategies and resilience factors can help to alleviate such stressful experiences, and I explore their associated dimensions. Lastly, I provide the theoretical foundation for this study.

Literature Search Strategy

The literature search strategy included an extensive search of peer-reviewed articles, scholarly journals, and books articles. EBSCO host provided several articles that were used for this review. Furthermore, Walden University's library, Google Scholar, Wiley Online Library, and online databases such as PsyARTICLES, Science Direct, Academic Search Premier, and Lexis-Nexis Academic provided supplemental resources to find articles. I searched the databases using key terms such as *disability and natural disaster* as the foundation of all reviews. Other search terms I used included *persons with disabilities, hurricanes, coping, resilience, community*, and hurricanes' impact. I also reviewed references from retrieved articles to find extra information that was not obtained from the general search.

The following literature review provides insight into how people with disabilities show resiliency when facing a natural disaster and describes how they use coping strategies and resilience during and after hurricanes. Most of the literature was published between 2004 and 2016. Some foundational literature published within the last the 5 years provided the theoretical background for the literature review, including the writings of Bonanno (2014), Southwick et al. (2014), Svetina (2014), and Welsh (2014) on resilience theory.

Theoretical Framework

Resilience theory was the theoretical framework of this study. Several researchers have defined resilience as a "process of adapting well in the face of adversity, trauma, tragedy, threats or even significant sources of stress" (APA, 2014, para. 4); and "as a process of overcoming the negative effects of risk exposure, coping successfully with traumatic experiences, or avoiding the negative trajectories associated with risks" (Wang et al., 2015, p. 354). Bonanno (2004) defined resilience as a person's capacity to maintain a constant, reliable level of emotional and physical functioning following exposure to unsettling events, for example, natural or human-made disasters as well as the ability to sustain procreative capabilities and positive feelings. According to resilience theory, a person's characteristics influence his or her ability to overcome difficult situations (APA, 2014; Svetina, 2014; Welsh, 2014). Taormina (2015) considered four factors that influence resilience: (a) determination, (b) endurance, (c) adaptability, and (d) recuperability (Taormina, 2015).

Determination

According to Taormina (2015), a determination is a resolution and persistence toward goal attainment or in overcoming a challenge. For example, Taormina provided the example of a severely injured soldier who, even while experiencing pain, was determined to weaken the opponent and to save soldiers from another group being attacked. Another example of determination could be illustrated by thinking on how people on hemodialysis responded when Hurricane Sandy hit. Some people on hemodialysis decided to remain home regardless of potential risks involved in missing maintenance treatments and possible dietary complications to ensure that they did not clutter emergency rooms (Murakami, Siktel, Lucido, Winchester, & Harbord, 2015).

Endurance and Adaptability

Endurance is the strength and courage a person has in dealing with challenging experiences (Taormina, 2015), and it can be either cognitive or physical. Adaptability is the flexibility and the ability of a person to handle stressful situations while learning to regulate and to adapt to environmental modifications. It is usually determined by cognitive abilities because a person can be aware that he or she may need to change to fit a certain situation despite whether he or she is ready to change or fit into a different environment. For example, persons who are displaced or had to relocate to different areas must also adapt to the culture and behaviors of other residents in their new location.

Recuperability

Taormina (2015) demonstrated that recuperability involves learning and understanding how to emotionally and physically recover from different types of injuries, obstacles, or problems, which allows a person to return to his or her previous condition. Taormina asserted that resilience rotates around a person’s assumptions of returning to the stress-free lifestyle that he or she experienced before a disaster. Bonanno (2004) argued that recuperability is a form of physical resilience, and it depends on different influences. In this sense, a person’s survival knowledge plays a role in self-care skills and recovery (Taormina, 2015).

Literature Review

The review of the literature begins with a definition of disability, a description of the estimated number of persons with disabilities in the United States, and a portrayal of the challenge’s persons with disabilities face. Next, I review challenges persons with disability face after a natural disaster followed by a description of resilience and coping strategies. Finally, literature related to resilience and coping strategies used among persons with disabilities in the aftermath of natural disasters is presented.

Disabilities

The ADA of 1990, as well as subsequent amendments, defined a person with disability as someone who (a) has a physical or mental impairment that limits one or more major life activities, (b) has a record of such impairment, and (c) is regarded as having such impairment. Disability does not necessarily refer to a single classification; disability is a demographic classification that is comparable to race or gender (Brault, 2012).

However, most federal programs describe disability as an impairment or restriction that influences the need for assistance. For instance, the Social Security Disability Insurance programs provide funds for people who are unable to participate in significant productive activities (Brault, 2012). The International Classification of Functioning, Disability, and Health (World Health Organization, 2001) classify disability as deficiencies or restrictions in activity. The severity of impairment can also be defined along a scale that reflects people with disabilities' different functioning levels (Brault, 2012).

Krahn, Walker, and Correa-De-Araujo (2015) classified disability in terms of sensory conditions (deafness or severe difficulty in hearing, blindness, or severe difficulty in seeing), cognitive conditions (serious difficulty focusing; remembering; or decision making because of a physical, mental, or emotional condition), physical conditions (serious difficulty walking or climbing stairs, difficulty dressing or bathing, and difficulty doing errands alone [e.g., visiting a doctor's office or shopping]), and other mental or emotional conditions.

The APA (2013) classified intellectual disability as mild, moderate, severe, or profound. These classifications are based on a person's adaptive behavior, including conceptual behavior (language, reading, writing, math, reasoning, knowledge, and memory), which is used to solve problems among other activities, and social behavior (awareness of others' experiences, empathy, interpersonal communication skills, friendship abilities, social judgment, and self-regulation, among others). Lastly, practical adaptive behavior is another indicator that involves self-management across life settings, including personal care, job responsibilities, money management, recreation, managing one's behavior, and organizing school and work tasks, among others (APA, 2013).

Estimated Number of People with Disabilities in the United States

According to the United States Census Bureau (2014), the estimated number of Americans with disabilities is between 12% and 18.7%. The Americans with Disabilities 2010 report indicated that in the past years, the number of people with disabilities increased approximately by 2.2 million (Americans with Disabilities Act, n.d.). Krahn et al. (2015) found that people with significant disabilities account for more than 12% of the entire U.S. population.

The United States Census Bureau (2014) estimated that the changes happening among Americans with disabilities and natural disasters appeared to influence the livelihood challenges for people with various types of disability. Likewise, the Income and Program Participation (2010) survey showed that about 18.7 % of the U.S. nationals have at least one disability situation. Additionally, Stoddard (2014) found that 12.6 % or roughly two-thirds of people with a disability encounter daily living challenges and exposure to hurricanes is likely leaving these people severely vulnerable.

Stoddard (2014) asserted that people ranging from 65-years-old and above are more likely to have the highest percentages of disability. Percentages of individuals with disabilities were lower in the Midwest and Northeast, with the South and West or

Northwest having slightly higher rates of people with disability (Stoddard, 2014). Cognitive disabilities with 4.4% and ambulatory disabilities with 5.3% were predominant among people between 18- to 64-years-old (Stoddard, 2014). In the United States in 2013, the national percentage of the U.S. population between 18 to 64 years who reported having a hearing disability was 2.1%, a vision disability 2%, cognitive disabilities 4.4%, ambulatory disabilities 5.3%, self-care disability, 1.9%, and independent living 3.7% (Stoddard, 2014).

Challenges People with Disabilities Face

People with disabilities are more likely to face several challenges in their lives, and there is a higher probability that individuals with chronic illness (e.g., Type 2 diabetes, cancer, heart diseases, etc.) experience difficulties when engaging in daily activities. The Centers for Disease Control and Prevention (CDC, 2016) affirmed that persons with disabilities in the United States encounter barriers that are significantly and repeatedly likely to affect their welfare. Furthermore, researchers affirmed that a manifestation of chronic conditions, in addition to disability, is related to poor health status and unhealthy behaviors (Froehlich-Grobe et al., 2016). People with physical disabilities or cognitive limitations had significantly higher prevalence rates for severe chronic diseases than individuals without disabilities (CDC, 2016a). Froehlich-Grobe et al., 2016). People with disabilities who were between 18-to 64-years-old had considerably lower chances of fulfilling mental health care visits than people without disabilities (Houston, Gomes, & Naccarato, 2016).

Disability results from the interaction between conditional restrictions and obstacles to operating in a person’s environment. The environment consists of the physical environment as well as social factors like culture, attitudes, economics, and policies that influence people’s life experiences. However, environmental factors affect people’s health-related outcomes and have functional consequences that can improve or obstruct a person’s sustained health or quality of life (Krahn et al., 2015). The following issues can form additional obstacles for people with disabilities:

Health insurance. The World Health Organization (WHO) illustrated barriers that are more than just physical difficulties (as cited in Krahn et al., 2015). Krahn et al. (2015) affirmed that the rate of insurance coverage is usually similar among individuals with or without disabilities; however, the type of coverage varies. The number of people without disabilities with private health insurance exceeds the number of individuals with multifaceted restrictions (e.g., severely disabled). Low numbers of people with disabilities are privately insured because most insurance companies assume that individuals with disabilities require extensive coverage and are, therefore, less likely to insure people with disability for fear that individuals with a severe disability would require extensive or expensive coverage. As private health insurance companies are for profit, these companies can avoid paying higher treatment charges by choosing not to cover certain treatment expenses, leaving some without feasible options to be insured (Krahn et al., 2015). These situations that could prevent such individuals from being insured were addressed in the Patient Protection and Affordable Care Act (PPACA).

PPACA’s approach was to curb healthcare and health insurance challenges, especially for people with preexisting conditions. Additionally, this law specified that individuals with preexisting conditions could not be charged more or denied treatment. Also, the law provided rules and regulations to stop insurance companies from making unjustified rate hikes. The implementation of the PPACA law required the compliance of health insurance companies (Krahn et al., 2015). However, it was demonstrated that this compliance did not solve all challenges in healthcare insurance coverage, as some individuals were still left without health coverage, especially those with psychological disabilities who were not fully insured. Also, greater coverage led to higher deductibles and copayments, creating other obstacles for accessing health insurance (Krahn et al., 2015).

Krahn et al. (2015) suggested that the high cost of healthcare is more likely to prevent a person with a disability from receiving desirable treatment. The CDC (2016b) defined these obstacles as circumstances or concerns in people’s milieu that, through their absence or existence, limit functionality and likely create a disability, like (a) physical settings that are not manageable; (b) lack of applicable assertive technology in the form of assertive, adaptive, and rehabilitative devices; (c) people's negative feelings or attitude toward disability; and (d) nonexistent services, systems, and policies. Furthermore, the CDC highlighted some additional obstacles (e.g., attitudinal communication, physical, policy, programmatic, social, and transportation).

Policy barriers. According to the CDC (2016a), policy barriers are often connected to a lack of awareness, whereas the implementation of standing laws and regulations that involve programs and activities that increase access to health care and other benefits may be one means of removing barriers for people with disabilities. Several examples of policy barriers are when a person with disabilities is denied the chance to partake in or to use federally funded programs, services, or other benefits; is prohibited access to programs, service benefits, or opportunities to participate as a result of physical barriers; or is affected by an inability to provide suitable accommodations to qualified people with disabilities. These factors can prevent people with disabilities from executing critical job duties or from participating in society and different programs.

Social Barriers. Social barriers are associated with the settings in which people are born, grow, live, learn, work, and age. Also, social elements of health can affect those with disabilities and potentially exacerbate declined functioning. Several examples of social barriers include the high unemployment rate of people with disabilities resulting from the small numbers of people who are hired. CDC (2016a) demonstrated that the U.S. Bureau of Labor Statistics 2014, indicated the level of unemployment as higher in individuals with disabilities compared to those without disabilities

Stoddard (2014) reported that individuals with disabilities between 18–64 years were less likely to be well educated. Adults with disabilities older than 25 years are less likely to have completed high school compared to their colleagues without disabilities. Stoddard affirmed that according to the U.S. Census, American Community Survey 2013, individuals with disabilities are likely to live in a disadvantaged environment than people without disabilities (Stoddard (2014). People with disabilities, therefore, form a different cluster of individuals who frequently share the experience of living with significant restrictions on their functioning. As a result, they may be regularly excluded from participating in community activities (Krahn et al., 2015).

Obstacles People with Disabilities Face Following Natural Disasters

People with disabilities experience diverse challenges in dealing with daily life following disasters such as hurricanes (Kaufman, Levenson, & Hanson, 2012). For example, Stough, Sharp, Decker, and Wilker (2010) found that lack of accessible housing, transportation, and medical services for people with disabilities significantly interferes with their recovery from a disaster. In general, system failures are among the issues experienced in the aftermath of natural disasters that most affect people with disabilities, for instance, the absence of hospice services or other health accommodations (Kent & Ellis, 2015; McDermott, Martin, & Gardner, 2016). McDermott et al. (2016) asserted that during South Carolina's "1,000-year flood," therapists were not positioned in shelters to provide emotional treatment services. Also, no interpreters were on site to help deaf people or those with hearing difficulties to get information or to communicate their needs. As a result, many people who needed services had to utilize hospital services (McDermott, Martin, & Gardner, 2016).

In the case of Hurricane Sandy, the National Council on Disability (n.d.) affirmed that there was inadequate protection provided to the vulnerable population. For example, these people encountered challenges in accessing equitable emergency shelters and transportation (Milford, 2013). Another example of difficulties experienced in the advent of natural disasters occurred in Vanuatu whereby disaster emergency supplies were unevenly distributed following the 2015 Cyclone Pam in Vanuatu.

Vanuatu is an island country in the southern Pacific Ocean, which presents some complications for disaster relief. Relief locations were dispersed and not easily accessible by people using wheelchairs or by individuals with mobility impediments. Meanwhile, people who made it to these locations but did not request accommodation or alert the service distributors did not receive food supplies. Hence, this indicates that people with disabilities who had physical limitations were prevented from arriving at the emergency supply locations and getting the help that they needed.

According to Jan and Lurie (2012), when Hurricane Sandy hit, people living in nursing homes, independent living facilities, and home health agencies with acute hearing, vision, ambulatory, and cognitive difficulties were significantly affected by disasters as they required assistance and provision of medical equipment, medical care, electricity, shelters, and emotional care. Some emergency shelters were not equipped to provide adequate care to people with disabilities, as they needed equipment such as oxygen therapy, medical supplies, ventilators, hospital beds, or wheelchairs (Jan & Lurie, 2012).

Specifically, in the case of Hurricane Sandy, researchers found that power outages, disruptions in the transportation system, and damaged infrastructure significantly delayed people’s access to maintenance hemodialysis (Murakami et al., 2015). The absence of equipment and accessible shelter prevented some people with disabilities from getting needed medical care (Jan & Lurie, 2012; Milford, 2013). For example, Murakami et al. (2015) affirmed that one of the hospitals in the Manhattan area considered a resource in providing continuous treatment for people on dialysis was unable to accommodate the number of people that came to the facility. Murakami et al. affirmed that less than 70 people were admitted to this facility, and about 30 people were relocated to other locations, while others were instructed to utilize home services and to prevent greater risks, people were encouraged to follow dietary recommendations (Murakami et al., 2015).

According to the reviewed literature, hurricanes significantly impact communities. I described some of the challenges, limitations, and obstacles that people with disabilities are likely to face during natural disasters. I now turn to provide information on how the victims seek to sustain or return to their previous lives following such disasters. The following sections provide a general literature review on how people with disabilities cope with and react to the aftermath of natural disasters.

Resilience of People with Disabilities after a Natural Disaster

Resilience is commonly understood as rebounding from challenges, adversity, or difficulties. It consists of resources and techniques used to reduce the adverse outcomes of life's challenging experiences and circumstances (Bonanno, 2005). It is also characterized as something that it is triggered and develops as a result of experiencing a traumatic course of events (Bonanno, 2005; Bonanno et al., 2006).

Furthermore, resilience and recovery are distinct terms that are likely to be used after traumatic events. However, resilience appears to be a useful response factor to deal with or overcome any traumatic events related symptoms or distress. Bonanno (2005) concluded that there is a difference between resilience and recovery following a stressful, traumatic situation such as natural disasters. A review of Bonanno's study demonstrated that past studies indicated that there were fewer efforts made to distinguish people who had visibly exposed to traumatic events but presented no symptoms such as “Post-Traumatic Stress Disorder” (Bananno, 2005 p. 136).

Therefore, this suggests that resilience is an influencing factor in a person’s recovery process. However, current studies have affirmed that resilience and recovery are distinct terms that should not be used interchangeably as each term reflects people’s responses when exposed to a traumatic situation. Bonanno gave examples of death of a loved one and human-made events such as terrorism. Hence, his statements seem to suggest that resilience and recovery are both distinct terms that shouldn’t mean a similar person’s ways of responding to the traumatic situation encountered (Bonanno, 2005).

Furthermore, Bananno (2005) asserted that his researcher developments indicated that resilience usually utilized as a response to traumatic encounters. Although some influencing factors are likely to support high will affect, generally, similar features that appear to encourage growth. For example, situational influences that include stronger or closer supportive networks or connections and the personal district factors that can identify one’s abilities to adjust regardless of going through more onerous or difficult situations need to support people’s resilience mainly in adults (Bonanno, 2005). Hence, people use resilience as a response to their related traumatic symptoms without discrimination of symptoms.

People with disabilities are more likely to adjust to tragedies when they use resilience factors that are connected to supporting systems for example personal values, family, and work (Fox et al., 2010).Therefore, Kessel, MacDougall, and Gibbs (2015) suggested that a person’s resilience is more likely to be maintained with objectives focusing on reestablishing a renewed wellbeing, familial and personal networks, and secure community.

Fox et al. (2010) concluded that such factors give people a strong determination to uphold his or her wellbeing, and similar factors need to influence communities or areas where there more vulnerable groups of people (Fox et al., 2010). However, Kessel et al. (2015) and Cutter, Barnes, Berry, Burton, …et al. (2008) concluded that improving community resilience requires a combination of various systems combined such as “media, government, and relief agencies” and the person’s resources from either current or newer network systems (Kessel et al., 2015, p. 678).

Fox et al. (2010) found that people’s readiness to change and to reverse ways they are used to conduct their things following Hurricane Katrina this influenced some people to adjust to a limited time whereas others were able to consider their past experiences and make imagination what of what the future holds. Hence, identifying the advantages and disadvantages of either to change or not to change facilitated the survivors’ ability to formulate long-term strategies that would enable them to cope with new situations (Fox et al., 2010).

Fox et al. (2010) asserted that people with disabilities need services that are connected to their social and medical organizations because it would facilitate people with disabilities response to catastrophes. However, Kessel et al. (2015) explored the procedure of resilience in various structures among the Australians who experienced a natural disaster, argued that resilience should not only base on personal or societal levels as it is challenging for people with disabilities to live through a natural calamity.

Furthermore, Kessel et al. (2015) explored the interventions that are likely to influence resilience in adults following a natural disaster. Results affirmed that various approaches, for example, materials that support a person overcoming feelings and able to constructive choices and strategies or allowing quick access to resources; and direct communication strategies that include community events that repair or build new communal networks. Transformation of society abilities using volunteers or Nonvolunteer organizations, as well as policies that curb disaster dangers significantly influence resilience in adults. Hence, it is apparent that combined system networks within a person's community are more likely to support that person's ability to formulate strategies that can help him or her to survive after a disaster.

Coping Strategies

Researchers define coping as the way that a person deals with stress following a challenging situation (Renard & Snelgar, 2015; Wu et al., 2008). Researchers found that coping strategies are an influential factor in either increasing or reducing trauma-related symptoms. A person who actively uses coping strategies is more likely to handle stress and to experience minimal negative symptoms following a natural disaster. Researchers found that people can use different strategies to solve their problems (Waitt, 2015). According to earlier researchers, coping includes the thinking, responses, and behavioral efforts that an individual utilizes to deal with stressors, which can include either problem-focused or emotion-focused coping (Folkman & Lazarus, 1980; Waitt, 2015). In reviewing past research, Schwarzer and Knoll (2009) found that, overall, coping consists of a person's actions, best efforts to deal with stress or emotional distress following a challenging natural event.

Problem-Focused Coping. According to Carroll (2013), problem-focused coping is a strategy that helps people finds a resolution of how to handle a stressful condition. The goal of the problem-focused coping is to help people identify solutions to the problems they are experiencing, thus allowing them to share their thoughts and emotions (Green et al., 2010; Whittle et al., 2012). Carroll identified different types such as, the ability to take charge of the stressors (e.g., eradicating the cause of the anxiety), looking for information or supporting systems that help manage challenging circumstances. Problem-focused coping differ from an emotion-focused coping because of its focus on changing distressful situations to desirable positions; however, the emotional coping is intended to handle the feelings related to the challenging condition (Carroll, 2013).

In other words, coping strategies can be used for different reasons. For example, the researchers Somech and Drach-Zohavy (2012) suggested that people utilize various problem-focused coping strategies when actively planning how to manage stressors in the environment outside of their realm of influence. Social support can serve as an example of a problem-focused coping strategy, as it helps people who have experienced a specific trauma deal with related emotions, thereby helping to reduce psychological distress (Gottlieb & Bergen, 2010; Waitt, 2015). For instance, people can rely on social support or networks as well as emotional strategies to deal with stressors that are within their reach (Duhachek & Oakley, 2007; Lowe, Chan, & Rhodes, 2010; Somech & Drach-

Zohavy, 2012). Researchers have found that problem-focused coping is less likely to be effective in helping people reducing stressors compared to emotion-based coping, especially for individuals who have no control over the stressful event (Somech et al., 2012).

Emotion-Focused Coping. Emotion-focused coping strategies are another means of reducing distress (Waitt, 2015). The application of coping skills and strategies may be based on a person's level of emotional distress and beliefs concerning the situation that he or she has experienced (Green, Choi, & Kane, 2010). Researchers continued to affirm that regardless of a person's developmental and physical abilities, an individual that uses healthy coping approaches is more likely to succeed than people who use unhealthy coping strategies. Therefore, individuals in control were found to be more likely to have used strategies to decrease and to alleviate their emotional distress resulting from exposure to a traumatic event (Green et al., 2010; Waitt, 2015).

Emotion-focused coping can be both significant and not significant /destructive coping strategies such as a person can use pray, utilize relaxation techniques like meditation, listen to soothing music, sensor material (lotions), and aromatherapy. All these techniques might be useful in helping a person feeling well after going through a distressing situation; however, it might not resolve the issues at hand. Destructive or not significant coping strategies may include isolation, denial, using illicit drugs, and eating poor diet food, and these can shortly alleviate feelings, but in the long run, can generate further complications. Therefore, a discussion of the coping strategies used by people with disabilities as well as their reactions following a hurricane I provided in the next section.

Coping Strategies of People with Disabilities

Researchers have suggested that healthy coping strategies significantly influence the lives and outcomes of people with disabilities in the aftermath of a disaster (Greenglass, 2002). People with disabilities are likely to experience trauma following a disaster (Fox et al., 2010; McDermott, Fairbank, Gruber, Jones, Osofsky, Pfefferbauet et al., 2016) and, thus, are more likely to benefit from healthy coping strategies such as, interacting with positive relationships, eat nutritious foods and exercising comparing to non-healthy coping strategies for example drinking alcohol, poor diet or nutrition, etc. and engaging in illicit (Harrison & Westwood, 2009). Hence, it is beneficial to understand how coping strategies influence disaster-related trauma.

In reviewing the current research, Schwarzer and Knoll (2009) however, found that people's success in dealing with difficult circumstances following a challenging event was dependent on their efforts put forth when consciously or subconsciously, to manage stress and trauma-related symptoms. Meanwhile, Renard and Snelgar (2015) asserted that having a social support system could help individuals deal with stress or trauma following a disaster. Furthermore, Kendall-Tackett (2009) found that natural disaster-related trauma leads to psychological distress, which can cause individuals to react differently; a negative reaction can lead an individual to experience increased illness and weakness, which can later impact his or her level of functionality.

Similarly, the National Council on Disability (n.d.) suggested that people with disabilities who utilize limited coping strategies or none following hurricane disasters can experience a multitude of emotional distress, depending on their reactions (Zhang & Cai, 2012). Though, less is known about the effectiveness of two types of coping strategies, problem-focused and emotion-focused, among people with disabilities in managing emotional distress following a natural disaster (Zhang & Cai, 2012). Therefore, there is still much to be explored in the role of coping strategies in facilitating people's welfare following a natural disaster, although I outlined the existing research as follows.

In this scenario, coping strategies are influential, yet ineffective coping strategies can also impede an individual's ability to manage stressful situations. Even so, a person experiencing trauma would likely take active steps to deal with stressors (Drach-Zohavy & Somech, 2014). Depending on the utilized strategy, a person may achieve relief, thus helping him or her to restore his or her health and well-being (Somech & Drach-Zohavy, 2012). Researchers have found an association between increased or reduced psychological distress and coping strategies, which may be either adaptive or maladaptive.

Adaptive and Maladaptive Behavioral Coping Strategies. Adaptive behavioral coping strategies facilitate greater well-being, whereas maladaptive behavioral coping strategies result in unhealthy or risky behaviors (Zhang & Cai, 2012). In most cases, an individual's feelings influence his or her welfare, and individuals who engage in negative behaviors such as drinking alcohol or using illicit drugs are more likely to experience health or daily difficulties. Various behavioral means of dealing with distress might lead to increased symptoms of PTSD (De Freitas et al., 2012), whereas people who use positive coping strategies are less likely to experience challenges when dealing with trauma (Najdowski & Ullman, 2009; Putterman, DeLongis, Lee-Baggley, & Greenglass, 2009; wilkinson et al., 2012).

Wilkinson et al. (2012) affirmed that people with disabilities who engage in unhealthy coping behaviors struggle to maintain their well-being; therefore, coping strategies alone cannot help a person manage stressors following the aftermath of a disaster, as some coping strategies can impede an individual's ability to manage stressors. An increase in trauma-related symptoms following a natural disaster such as a hurricane could potentially be the result of increased unhealthy behaviors or coping strategies such as drug abuse or poor health caused by poor diet or nutrition, etc. (Wilkinson et al., 2012)

Researchers have found that trauma influences psychological distress following a natural disaster, often leading to further trauma-related symptoms in people with disabilities (Beer & Moneta, 2010). Nevertheless, feelings associated with self-capabilities are significant controlling factors in people's selection of healthy coping strategies (Beer & Moneta, 2010). For example, a study found that increased self-confidence among people with disabilities led to the use of behaviorally adaptive coping strategies, while those with diminished self-worth opted to use maladaptive coping strategies (Beer & Moneta, 2010).

To emphasize the benefits of using coping strategies among people with disabilities, Beer and Moneta (2010) found a relationship between healthy behaviors and the capacity to adapt to new life circumstances. Wilkinson et al. (2012) concluded that people engaged in healthy behaviors, for example, physical activity and adequate nutrition were emotionally stable. Hence, suggesting that when unhealthy and healthy coping behaviors combined, people might likely struggle to maintain their well-being.

Similarly, Zen et al. (2012) found that a lack in exciting activities and the adaptation to risky survival behaviors such as illicit drugs contributed to symptoms related to psychological distress and diminished interest in activities that people once enjoyed. Unlike people without disabilities, people with disabilities may engage in limited survival skills and possibly in unhealthy behaviors that involve using illicit drugs when dealing with stressors following a disaster. Moreover, they might firmly believe that using such unhealthy behaviors can restore or improve their welfare (Nixon et al., 2011; Shirom et al., 2011).

Waitt (2015) stressed that increased distress could easily lead people with disabilities to expose themselves to health risks and begin to adopt a negative attitude or perception of events. As a result, such negative attitudes can increase emotional distress and later lead to decreased well-being. For example, a person exposed to a disaster might experience negative beliefs him or her to only feel worse about him or herself.

Furthermore, Shepard (2013) found that people with a negative attitude tend to engage in unhealthy behaviors, such as drinking alcohol and using drugs. Hence, unhealthy behaviors appear to be ways of relieving emotional distress but, in most cases, lead to greater stress and health risks, which eventually create differences in well-being between those who choose unhealthy strategies and those who use positive behavioral coping strategies (Waitt, 2015).

Another study found that people formulated distinct strategies for dealing with the stressors of natural disasters (Hernandez, Engstrom, & Gangsei, 2010); hence, approaches to deal with challenges in the aftermath of a disaster can be defined (Harrison & Westwood, 2009). Other researchers have found coping strategies to vary according to individual differences, characteristics, and environments (Green, Choi, & Kane, 2010)

Proactive Coping Strategies. Proactive coping strategies should be used if an individual begins to exhibit depressive or anxious symptoms or maladaptive behaviors. Drummond and Brough (2016) suggested that proactive coping likely to be unpredictable in older people. Drummond and Brough affirmed that proactive coping differed among people and those with higher education presented different personalities that might have influenced their ways of coping with situations.

Researchers have asserted that proactive coping is a combination of a person's behavior and determination to accomplish his or her goals (Renard & Snelgar, 2015). This process encourages a person to identify resources that are helpful in promoting growth and helps people actively work toward improving their well-being and learning to adapt to different settings (Roesch et al., 2009; Schwarzer & Knoll, 2009).

One study indicated that during the proactive phase, a person uses both internal and external resources to overcome practical challenges (Greenglass & Fiksenbaum, 2009). Internal resources consist of confidence and belief in skills essential to dealing with stress, and external resources also deal with emotional and social supports that affect one's feeling. Hence, this suggests a relationship between proactive coping techniques and emotional support seeking.

Hu and Gan (2011) asserted that proactive coping strategies could be taught, learned, and designed in given circumstances. Similarly, Adebayo, Sunmola, and Udegbe (2008) suggested that suitable, personal approaches for handling a crisis event could be demonstrated to those in need. Furthermore, researchers found a substantial age difference in the use of proactive coping strategies, which was higher in adults than in young people (Renard & Snelgar, 2015). In this respect, Miller, Roberts, Zamora, Weber, Burleson, Robles, et al. (2012) also found that life experiences can significantly influence peoples' approaches when dealing with distress following a disaster event.

Renard and Snelgar (2015) argued that age differences might be due to younger adults being unaware of the possible outcomes of an event and their smaller backup systems. No relationship was found between gender and planned preparation or effective support. Both men and women extensively used proactive coping strategies (Miller et al., 2012), although Renard et al. (2015) affirmed that females were more likely to depend on emotional support, make use of social resources, and seek advice during a problem-solving process than men, who were more likely to use instrumental social support to cope. Renard and Snelgar asserted that these findings emphasized the importance of a combined network and of seeking emotional support and advice from others when dealing with psychological challenges.

Active Coping. Carroll (2013) asserted that active coping uses emotional or behavioral coping determinations that are categorized by an effort to practice personal strategies focused on managing or handling a problematic condition. In other words, active coping intended either modifying worrying state with a goal to curb stressful situations or changing a person’s thinking and to feel toward a changing reaction. An example includes when a person is aware of the stressing situation and through the awareness use problem -solving skills and resolves a problem that ignoring it or denying the existence of the problem, which usually results in drinking alcohol, withdrawal behaviors, excessive or lack of sleeping, lack of interest in a thing of interest, etc.

Instrumental Support Seeking. Instrumental support seeking aims to curb short-term emotional distress through reliance on the support of others**.** Additionally, it includes seeking out friendships with one social network for support. Instrumental supports can include attaining guidance, criticism, or information from others that form an individual’s public support system when managing trauma and stress (Renard et al., 2015). During this process, a person identifies resources that can provide him or her with assistance yet also help him or her to find resolutions to experienced difficulties. Such support is particularly helpful for men during decision-making processes associated with stressors, enabling them to visualize future achievements and set goals (Renard et al., 2015).

Summary and Conclusions

This literature review provided background information on how hurricanes impact people’s lives, and particularly, a review of the many challenges people with disabilities face. Concepts such as resilience and coping strategies were reviewed along with a description of how people with disabilities showed resilience and coping in the aftermath of a natural disaster. The impact of a natural disaster can be a stressful experience that may interfere with a person’s psychological, emotional, social, and physical wellbeing. In addition, forced dislocation not only causes trauma, but also the outcomes tend to have a significant impact on a person's ways of dealing with the life challenges. There has been minimal research on the impact of hurricanes among people with disabilities. Therefore, this research fills the gap by exploring people with disabilities coping strategies and resilience factors in the aftermath of Hurricane Sandy. In the next chapter, I provided information on how this study was executed, how the participants were identified, the questions that I asked, and how the resulting data were organized and analyzed.

Chapter 3: Research Methods

Introduction

The purpose of this phenomenological study was to explore, understand, examine, and describe the resilience factors and the coping strategies used by people with disabilities 5 years after Hurricane Sandy. The goals of this qualitative study were to analyze and to interpret people's experiences and their perceptions of the aftermath and how they dealt with the disaster. In this chapter, I describe the qualitative research methods used and provide a justification for the research questions. In addition, I detail the reasons for selecting a qualitative design, and I describe the population of interest and the chosen sampling method. I explain the instruments and how they were used to obtain information. Finally, I justify the methods used to analyze the data and to interpret the results, and I also discuss threats to data quality.

Research Design and Rationale

The research questions posed for this study are as follows:

1. What are the coping strategies and resilience factors people with disabilities used to recover from the Hurricane Sandy experience?
2. How did people with disabilities maintain their health and psychological well-being following Hurricane Sandy?

The central phenomena of the study were coping strategies and resilience factors among persons with disabilities who experienced Hurricane Sandy. The ways in which people with disabilities experience natural disasters has remained largely unexamined in the existing disaster research (Banks & Weems, 2014). People with disabilities face various challenges, such as physical, social, environmental, and medical issues; thus, their ability to deal with disaster-related stress likely influences their livelihood and wellbeing. People with untreated stress issues are likely to be at risk of experiencing psychological, emotional, and health challenges (Froehlich-Grobe et al., 2016). I explored and described coping strategies and resilience factors people with disabilities used in the aftermath of Hurricane Sandy. Phenomenology was the qualitative research design that was selected to explore the experiences of persons with disabilities who suffered the impact of this hurricane. I chose this approach because it aligns with the focus of the study that is, looking at people's life experiences. Using this approach, as a researcher I used an informal and interactive process that focused on exploring people with disabilities' experience from Hurricane Sandy 5 years after Particularly, I used interpretative phenomenological analysis (IPA).

IPA originated in the field of psychology, and it has progressively been used in comprehending experiences of psychological distress, making it a great match for the study of people's resilience and coping skills under stress. Pietiewicz and Smith (2014) asserted that researchers use IPA as a guide to explore and draw out people's accounts of their life events. IPA helps researchers to get actual meanings of how people interpreted their experiences. IPA involves an investigative and analytical process.

IPA focuses on a double interpretative method; it prompts the researcher to attempt to interpret the individual participant experiences alongside the shared and collective ways in which a group of participants makes meaning of their accounts.

Additionally, IPA uses codes or ideograms to communicate the meanings of people's accounts. The use of the qualitative phenomenological tradition allowed me to explore people with disabilities' experiences with Hurricane Sandy and to understand what coping strategies and resilience factors people used to deal with the disaster.

Under this approach, I interviewed people with disabilities who were victims of the Hurricane Sandy disaster. Participants described their personal experiences of events during and after the hurricane in addition to their management of stress or reliance on support systems.

The phenomenological inquiry was based on participants' interpretations of events and experiences, and I analyzed the themes encountered in participants' narratives. The data facilitated the development of a combined description of people's shared experience of Hurricane Sandy. The description of the data consisted of people with disabilities' Hurricane Sandy experiences and how they managed to maintain their lives following the disaster using coping strategies or resilience factors.

I mainly put the focus on describing people's experiences in dealing with Hurricane Sandy using their coping strategies and resilience factors. Creswell (2013) and Patton (2015) asserted that Husserl (1970) talked about the necessary process of awareness; hence, in my study, I focused on how each person perceived his or her emotional experiences when coping with Hurricane Sandy's aftermath.

In this way, I purposefully showed participants' experiences from dealing with the studied hurricane disaster. I collected data from various people with disabilities who experienced Hurricane Sandy; during this data collection, I ensured that bracketing was observed by analyzing personal conceptualization separately from those of the people who volunteered to participate in the study. During interviews, I focused on how each person with disability's welfare and relationship with his or her community or family had been affected, how the person's personal life had been affected, and what coping strategies and resilience factors helped each participant uphold his or her wellbeing following Hurricane Sandy

I used guiding open-ended questions, and I focused on gathering information that eventually led to a structural description of people's event experiences meanwhile providing an understanding of the collective experiences of the participants. Also, in this study, I used the qualitative methodology to highlight the nature and significance of findings through the investigation of people's experiences and comparisons of the experiences of all participants.

Role of the Researcher

As a researcher, I had a duty to ensure that the research follows ethical guidelines and to ensure that I was aware of any potential biases and personal beliefs that would likely interfere with the data obtained and analyzed. When conducting this qualitative research, it was important that I collect the data; thus, it was essential to acknowledge any personal views, feelings, and prejudices that could potentially impact the research design.

The researcher is expected to make any conclusions that might be subject to personal biases. Among the conclusions, a researcher must consider the assumption on which the study is grounded, the formulation of the research questions, the arrangement of instruments, the process of data collection, and the analysis as well as interpretation of data (Creswell, 2013). Furthermore, in qualitative research, it is crucial that a researcher recognizes his or her thoughts and decisions related to potential participants before conducting the study. As a researcher, in this study, I contacted the participants, recruited participants, obtained consent forms, analyzed the data, and interpreted the analyzed data collected to provide a picture of what participants experienced. Additionally, I had anticipated ways in which this qualitative research might influence the outcome of this study and eliminate any biases.

Prior to starting the interview, I discussed with the participant the purpose of the study and how I would use the data collected. I was mindful of any possible power disparity with or exploitation of respondents that surfaced during the data collection. Also, to maintain sensitivity towards the vulnerable population, I used appropriate consent without coercion and provided appropriate accommodations. There are no known biases or conflicts of interest in this study.

Management of Bias

To eliminate biases and maintain confidentiality, during data analysis and reporting, I assigned codes to participants and removed personal information that might have identified the person. I treated participants with respect. Because I interviewed people with disabilities, I complied with the ethical principles of providing additional protection and using appropriate language (e.g., I called these participants "*people with disabilities" ... Not "disabled people*"). Before conducting the research, I used the bracket method, and this was to help me manage unforeseen personal experiences, biases, and the meaning participants would give to a studied phenomenon.

Methodology

Participant Selection Logic

Participants for this study included people with disabilities who experienced the impact of Hurricane Sandy. The sample included people with disabilities ranging in age from 18 to 65. I proposed to get a person from the Visiting Nurse Association (VNA) agency to help me distribute the invitation in the affected areas. However, the contact person left the agency; thus, nobody stepped to help. Therefore, I used other methods of data collection that IRB approved.

Patton (2015) defined criterion sampling as a method focusing on all cases that meet the sampling criteria. I used criterion sampling to recruit participants as I anticipated. Recruitment was initiated through snowball sampling/ chain referral. Snowball sampling/ chain referral is a form of meaningful sampling that the small sample is neither random nor generalize to a larger population; the data are likely to yield other research and provide education to relevant people. These processes facilitated the appropriate allocation of participants for the study. Participants, who met the following criteria, were selected:

- Self-report having a disability before Hurricane Sandy
- 18-to 65-years-old
- Able to verbally communicate in English

Patton (2015) asserted that qualitative phenomenological scholars focus on getting depth, not comprehensiveness of information on how people perceived a phenomenon. In this study, determining an appropriate number of participants was based on obtaining enough data that would represent enough and variety of people. According to Creswell (2013), the recommended sample size for qualitative method participants is between five and 25 respondents. Therefore, in this study, I interviewed 10 individuals with disabilities.

I remained flexible to adding more participants if there were no evidence of saturation in the information collected with these 10 participants. Saturation indicates a position at which further data collection ceases to provide any novel data (Dworkin, 2012; Fusch & Ness, 2015; Mason, 2010). In this study, results were saturated when collecting new data stops yielding unique and original results. Hence, 10 participants were enough to reach saturation.

How Participants will be Identified, Contacted, and Recruited

After receiving permission from the IRB to distribute information about the study, I contacted the agency, which was going to help me identify potential participants for the study. However, the contact person had left the agency; thus, I went to one of the affected areas. I distributed the invitations during my walk in the Rockaway Beach area, and I selected people who met the search criteria for the study. I also recruited participants through snowball sampling. I received referrals from participants who completed the interview process.

I had face-to-face interviews with 10 adults reported to have had a disability before Hurricane Sandy, lived in New York City, and who were significantly affected by Hurricane Sandy in a public library and at the beach (Rockaway Beach) as the location was convenient for many of the people interviewed. Hence, there was no need to use

Skype or phone interviews to collect data from participants scattered throughout the New York City boroughs (i.e., people at more than 30 miles from me (the interviewer).

I anticipated the interviews would not to last more than 90 minutes, but the actual interviews ranged in length from 21 minutes to 30 minutes. To ensure that no information was left out or missed, I audiotaped the responses, but before the interviewing process, I obtained permission from the respondents, and they all were receptive to audio taping the interviews.

Incentives can increase people's motivation to participate and engage in the study, but providing incentives is more likely to attract people who might not be fit for the study or people who might provide false information as they expect something in return for sharing their information. Therefore, to encourage participants to volunteer, the participants received the gift card of a $ 20-dollar gift card after the interview.

The scheduling of the interview happened after receiving participants' confirmations. I conducted one-on-one, in-person interviews at a location accessible to the participant. I collected and recorded the data with audio tape, but with written consent. The interviews lasted for at least 21 to 30 minutes, and I collected the data within 2 months, less than what I had proposed for 3 to 5 months. The frequency of data collection depended on participants' availability.

I recruited participant through distributing invitations and snowballing. I contacted potential participants via phone calls and physical contact. For each person contacted, I provided an explanation concerning the study and informed them that participation in the study was voluntary, confidential, and I indicated how I could be contacted (via my e-mail and phone).

Once the interviews were secured, I explained the purpose of the interview, how I would use the information, how the process would flow, and the anticipated time frame required to complete the interview. I reviewed the consent forms before the start of each interview and delivered (hand-carried) the consent form to each participant. I recorded interviews through a digital voice recorder.

During in-person interviews, I established a relaxed atmosphere, writing notes where applicable; I observed participant's body language used, asked open-ended questions, and followed-up on probes. I remained neutral, and I conducted myself politely and professionally. Before beginning the interview, I asked the participants if they had any questions; meanwhile, I cross-checked the accuracy of the provided information at the end of each interview. To maintain data collection consistency, I used similar guiding prompting questions in all participants' discussions.

I did not request the participants to provide their contact information for follow up as the interviews were recorded. Participants had a chance to withdraw from the study following the ethical principle (APAs Standard 8.08) debriefing that states that prior to collecting the data, I would have to provide information about the nature of the study and allow open discussion with participants. In qualitative research, participants discuss results with the interviewer. Therefore, at the end of each interview, participants were asked to provide their contact information where I would send a 1-2-page summary of the results, but only two participants were interested in getting the review of the results.

If an issue arises about the recorded data before finalizing the study, the error would be immediately corrected if there is an opportunity. If I cannot correct, however, the participant would be given a chance to opt out and not use his or her data in the study. In this case, there were no errors because, as the investigator, I carried out each interview, analyzed the data given by the respondents, and minimized risks by not asking personal information that would potentially harm participants.

Instrumentation

Demographic Questions

I asked demographic questions to the participants such as ethnicity/ cultural background, marital status, and disability status (Appendix A).

Semi structured Interview

I used face-to-face interviews and recorded them via audio tape to collect the data. I formulated at least three cores sets of open-ended guiding questions suitable for this qualitative research study (Appendix B). These questions elicited information describing how individuals managed to cope during and after hurricane disasters. To set the standard, I posed the first question that encouraged participants to share data about how they managed to handle the situation and lived their lives each day after the disaster. The purpose of the second question was to direct participants to convey their story about their Hurricane Sandy experience. The third question invited participants to narrate how they succeeded in sustaining their health and managed to remain psychologically stable during the time of the disaster.

Use of these questions depended on each person's informative and communicative style. These questions helped in prompting participants' responses. Another important reason for these questions was to ensure that I collected complete and thorough data. I based the semi structured interview questions on the literature review themes. Additionally, the questions also were based on what previous researchers asked from the reviewed qualitative studies on the topic.

Data Analysis Plan

Based on IPA recommendations for data analysis, I conducted thematic analysis (Smith et al., 2009). Data analysis involved reviewing the collected data, identifying themes, and synthesizing the results. Initially, I transcribed the data obtained from the interviews into a written format as Braun and Clarke (2006) suggested. Transcription is an important process for the researcher to get familiar with the data because it acts as a guide toward coding of themes. This stage is called familiarizing with data (Braun & Clarke, 2006). I transcribed the recorded interviews, which eventually developed into pages of transcripts.

I gathered the transcripts into a manuscript for each participant. After compiling all the information, I read the transcripts, and in the meantime, listened to the recorded interviews without reading the written texts. I analyzed each manuscript and interviews separately which helped me create various codes (Creswell, 2013; Patton, 2015). This stage was called the generation of the initial codes stage (Braun & Clarke, 2006). Following the coding stage was the stage of sorting different codes into possible themes. At this stage, I arranged the related coded information on recognized issues. This process helped me with data analysis and consideration of how various codes might be compiled to get the central theme.

After identifying common themes, I reviewed them to ensure that all ideas were supported by the obtained data or others that seem to collide with each other could be combined to come up with strong themes supported with the collected data or separated as the meaning for each theme might be different. During this reviewing ideas stage, I ensured that I reread the entire data set to see if there were any missing items from the initial coding phase that could be coded (Braun & Clarke, 2006).

I recorded the data from completed interviews using untraceable names such as John Doe. Using the textural descriptions, I wrote operational reports, which revealed the situation and milieu in which the event was encountered (Creswell, 2013). Following a written description of all the participants, I wrote the merged narrative of all the data comprises of the core phenomenon from the studied cases (Creswell, 2013). Lastly, I had the defined and named themes stage where I defined and named all the identified items, which I presented as my analysis (Braun & Clarke, 2006).

Setting aside all these phases, I used Husserl's (1970) and Moustakas's (1994) transcendental phenomenological approach as an important process in developing clusters of denotations from the accounts that later became themes (Creswell, 2013). When all identification and determination of topics patterns about the study research questions, I wrote a short description of each participant's individual experience. These reports followed the chronological encounters of the participants' experiences (Madison, 2005).

I stored the raw data on a password-protected computer in a first-person format. Participants confirmed all data analyzed. Analysis of the data focused on the Interpretative phenomenological framework, and I did data coding manually, hence; facilitated the textual descriptions derived from what and how, as well as code data and quotations that formulated themes (Creswell, 2013; Stake, 2010).

Issues of Trustworthiness

Guba's (1981) references shadowed the issues of trustworthiness connected to credibility; dependability and confirmability as well as transferability. Credibility showed the likelihood of results and dependability revealed the reliability of collected data, while conformability supported neutrality. On the other hand, transferability reflected on how a researcher might conclude that the results of this study are applicable in different situations (Owens & Martsol, 2014).

Credibility

In a phenomenological study, to show data reliability, groups formulated from the responses are sufficiently related to a person's experience of a studied phenomenon and categories must stand-alone and entirely different from each other (Ornek, 2008). In this study, I addressed issues of credibility from the data I obtained from the Interviews; thus, you conducted a good number of interviews to summarize participants' perceptions.

The summarizing of data supports the research. It helps the researcher to transcribe a well-researched study due to further sources of data, which regularly gives more insight into inconsistencies found in one data source. And this is reduced when various sources endorse similar data and provide validation while supplementing related data and obtained additional broad data. Also, maintained data and information in numerous places or types of research makes it easier to examine the data and come up with conclusions and effects. Lastly, summarizing is helpful as it helps the researcher to easily recognize the discrepancies in data (Ornek, 2008).

Data reliability was obtained by assessing the relations between the data content from the participants and the categories in which the information was located. I ensured that the themes I created connections to the phenomenon experienced by the participant. For instance, toward the end of each interview, I asked participants if they have any additional information they would like to add. To check for the accuracy and the correct meaning of the participants' message conveyed, I briefly summarized their responses, and conclude the interview by asking each participant to confirm if what I summarized gave a true picture of his or her story (Creswell, 2013; Patton, 2015).

Dependability and Confirmability

To assure dependability and confirmability, I compared the audiotaped transcripts to the developed notes; hence, running reliability check of the information. Earlier studies used interviews helped to form consent and finally data saturation (Owens & Martsol, 2014).

According to Patton (2015), saturation happens when participants added to the study do not influence other views or other information. Patton (2015) asserted that qualitative studies are based on attaining saturation and that this stage is usually reached through individual viewpoints on the area of the study of interest. Therefore, to get to saturation, I examined all the selected themes thoroughly.

Transferability

Researchers have affirmed that using data attained from qualitative research studies are likely to help others when a theoretical generalization is used. Thus, in relations to transferability, I provided discussions of the study findings, and I specified the participants' characteristics. I explained how the analyzed data could be applied to other hurricane situations, looking for rational theoretical similarities with an individual with disabilities (Creswell, 2013; Owens & Martsol, 2014; Patton, 2015; Willig, 2013).

Ethical Procedures

The consent forms adapted the APA Code of Conduct Standard 8. To follow the APA ethical principles related to research and publication as well as data dissemination, I addressed some of the following: participants' potential risks and benefits, beneficence of research, data integrity and confidentiality, potential conflicts of interest, informed consent, competence, etc. I have completed a graduate course at Walden University in qualitative methods, and I am a skilled and experienced clinician who is familiar with psychological distress (APAs Standard 2).

Potential Risks and Benefits

I expected the risks to be minimal, but I understood that the hurricane experience could be a difficult situation to discuss with people especially with people with disabilities. In this study, I did not focus on trauma or difficult situation, but rather asking people how they overcame the difficulties during and after Hurricane Sandy. However, those who expressed their willingness to participate helped this research by telling the story of their experiences, which will bring awareness to the policymakers.

Therefore, to minimize risks to research, I encouraged participants to withdraw from the study.

Data Integrity and Confidentiality

Data retention, storage, and the transfer of research data recorded follow Walden University policy about research data record-keeping. Hard copies and the electronic data follow the same procedure and will be stored for five years. The information is accessible with authorizations. I used code keys as a way of protecting and disguising information that would potentially identify the participant. Since these data will not be identifying any participant's information, after five years the information can be kept indefinitely (APA, 2013).

During the retention period, the collected data signed consent forms, as well as records associated with the study, including audiotapes/videotapes and photographs, is kept following Walden University's Internal Review Board (IRB) approved protocol. Accessing study data, signed consent forms, and transcripts associated with participants is limited to people permitted by the IRB, such as the University's research department, participants, and the researcher. All people identified above have access to the study data.

The information saved on external devices, such as computers, CDs, flash drives, and DVDs that identify any participant's identity is encrypted. For further protection of any revealing information, such devices are password protected. To ensure confidentiality, study code and signed informed consents are saved separately on a password protected computer and away from the encrypted data. Data is kept in a secure location. Before the research, confidentiality issues were reviewed with participants and they signed the release of information.

Potential Conflicts of Interest

At that moment, there were no conflicts of interest.

Beneficence

My interest was to obtain information, but to remain compliant with this principle; I ensured that people were not harmed or inconvenienced at the expense of obtaining the information warranted for the study (Creswell, 2013; Stake, 2010).

Informed Consent

Participant completed an informed consent form and had the opportunity to ask any questions related to the study. The form given to the respondents contained my name and the school's address (APAs Standard 4).

Protection of Participants' Rights

It is important to identify the ethical considerations and ensure that participants' safety is sustained throughout the process. I implemented the informed consent forms, maintained confidentiality, and managed record keeping and debriefing. Participants were encouraged to voice their concerns related to their involvement in the study (A PA, 2013, APA Standard 4). I reviewed some of the benefits of participating in the study and explained the impact of research on social change. Participants took part voluntarily and could withdraw from the study if they had experienced emotional hardship.

I highlighted potential emotional discomfort and coping strategies that helped the people overcome negative feelings. I included in the invitation letter information on available counseling centers that provide services to people who need to overcome psychological issues as it was likely that individuals would exhibit feelings when prompted to provide information about their loss, emotional stress, and lack of services.

I provided emotional support and used therapeutic skills such as reflection on feelings, empathy, communication, and listen (James & Gilliland, 2013). As guided by the National Association of Social Workers (NASW) Code of Ethics and the American Psychological Association (APA, 2019) principles, I provided empathy and protect survivors' dignity and privacy through cultural sensitivity, and I listened without judgment to participants presenting problems (APA, 2013; NASW, 1999).

As a culturally diverse person, and one who has received training in cultural competence, crisis intervention coping strategies, Psychological First Aid techniques, and obtained experience working with individuals with different background, and post-traumatic stress disorder, I engaged participants and made them feel valued and ready to participate in the study.

I provided participants the opportunity to either continue with the study or withdraw if they experience difficulties or fear for their safety. I gave information on counseling services in the area to participants who wish to complete the study (APAs Standard 2). Finally, to maintain confidentiality when publishing the findings, I will exclude the participants' names. People's identity will be protected using codes, and their names will be in initials.

Summary

This chapter outlined the target population and the procedures for data collection, as well as data analysis. Also, I described the ethical considerations and threats to data quality. The methodology defined the proposed approach to research, the setting, and the sample of participants as well as data collection and analysis methods. Therefore, Chapter Four provides a detailed description of the results, themes, and the interpretation of findings obtained from the interview transcripts. In Chapter Four, I interpret the collected data, and I also give a summary of the study and provide conclusions as well as recommendations for further research.

Chapter 4: Results

Introduction

The purpose of this study was to explore and describe coping strategies and resilience factors that people with disabilities used to recover from the Hurricane Sandy experience, and how they maintained their health and psychological wellbeing following Hurricane Sandy. Additionally, I sought to fill a gap in the current literature regarding the experiences of people with disabilities after hurricanes. I used phenomenological qualitative research to understand the lived experiences and people with disabilities' feelings following Hurricane Sandy.

The phenomenological qualitative research allowed me to capture the coping strategies and resilience factors among the participants who experienced similar Hurricane Sandy challenges. The phenomenological qualitative analysis provides an understanding of an individual's experience as it can find the full account of the experience and identify essential details that are significant to the person's entire whole story (Creswell, 2013). Individualized interviews permitted for exploration of the research questions. The two research questions were

RQ 1**.** What are the coping strategies and resilience factors people with disabilities used to recover from the Hurricane Sandy experience?

RQ2. How did people with disabilities maintain their health and psychological wellbeing following Hurricane Sandy?

In this chapter, I describe issues of trustworthiness, recruitment and sampling methods, the context of the study, the participants' demographics, the data analysis procedures, and the thematic results.

Data Collection

On April 18, 2018, I received approval to begin this study. Following the IRB approval, I began the recruitment process. I had proposed to get a person from the VNA agency to help me distribute the invitation in the affected areas. However, the contact person left the agency; thus, nobody stepped to help. Therefore, I used other methods of data collection that IRB approved. I distributed flyer invitations at the Library in Rockaway Beach, Queens Borough, New York (Appendix C). I also distributed flyers in the Flushing community and nearby areas where Hurricane Sandy hit. I distributed a total of 15 invitation flyers on Rockaway Beach and 10 fliers in the Flushing community and nearby areas. Interested potential participants who responded to the flyer contacted me by phone. I distributed flyers during my walk in the Rockaway Beach area, and people who met the search criteria were selected for the study. I also recruited participants through snowball sampling. I received referrals from participants who completed the interview process.

The interview process took place between April 24th, 2018 and June 25th, 2018. People who responded to my flyer invitation were screened to see if they met the search criteria. For those who were ready for the interview, I introduced myself briefly and explained that I had selected them as a potential participant for my study. I gave a brief overview of the study. The participants were enthusiastic and expressed their willingness to share their Hurricane Sandy experiences. I asked if they would prefer to schedule a later date and time for the interview, or whether they were ready to begin — only one person scheduled a later interview.

Before starting the interview, I gave participants a description of the consent form. I asked each participant to sign it, indicating that s/he agreed with the contents, was willing to take part in the study, and was not being coerced. All potential participants then completed a demographic survey (Appendix A). All the participants were able to fill out papers manually. The final sample consisted of 10 people who met the inclusion criteria for the study. All the participants were individuals who I did not know personally. They were all fluent in English. The interviews ranged in length from 21 minutes to 30 minutes. The participants each chose a public place for the interview that was convenient to them. I conducted interviews in a public library and at the Rockaway beach.

Once they had signed the consent form and completed the demographic survey, I turned on my digital recorder and began the interview. I selected a number to serve as a code for each interview, the goal of which was to protect participants' confidentiality. I then began asking the interview questions on an audio disc in MP3 format, which facilitated quick and easy uploading to my computer and played using Windows Media Player. All the audio recordings were clear and easy to understand.

The interviews were conducted using a semi structured approach. Therefore, it helped me to expand from the set list of questions and to explore concepts and information obtained from the conversations as they happened. In the interviews, I was able to relate to what the people were saying, which increased their willingness to give more information about their experiences and allowed them to feel comfortable with my questions.

Occasionally I noticed that, when I asked a question, the participant became quiet; with some participants, I had to repeat the same question in various ways before I received a full response. In these instances, I gave feedback and helped the participants to respond fully to the question. From my observations, it appeared that they were trying to recall what had taken place or to think more deeply about the phenomena in general.

As I progressed through the series of interviews, I developed a sense of the questions I could ask the participants that they would not be hesitant to respond to. I was, therefore, able to be direct when posing questions. I started noticing patterns in the participants’ recollections of their hurricane experiences. I recorded what I thought relevant during the data analysis process. I noted several distinctions between verbal and nonverbal expressions, indicating emotional influences, such as pain, frustration, depressive moods, and gratitude, among others.

At the end of each interview, I checked if they had more or comments about the interview. The recorded interviews were all adequate, so there was no need for any follow-up contact. I planned to interview 10 participants, and I felt I achieved saturation, and I did not need to exceed this number. I am confident that I had a diverse sample of participants and the data collected exceeded those of previous studies.

I used a password-protected computer to secure the audio recording files, transcriptions, and notes, as well as all the documents and materials related to the study. The hard copies were locked in a drawer with a padlock. I kept the data out of reach of everyone except my chair committee member who had access to the interviews. I acknowledged in the informed consent document. I was the only person to access demographic and interview information.

Setting

I conducted all of the interviews face-to-face in a public library and at the beach (Rockaway Beach), and this was convenient for many of the people interviewed. The sites were accessible for a person in a wheelchair, safe, and conducive to interviewing as there were minimal noises. There were no personal or organizational conditions that influenced the participants or their experience that would have affected my interpretation of the study results.

Demographics

I explored people with disabilities who were impacted by Hurricane Sandy in New York City. There were 10 people with disabilities (five males and five females) who participated in this study. All participants lived in the New York area. I summarized the data in Table 1.

They ranged in age from 54 to 65, were living with disabilities, and had experienced the impact of Hurricane Sandy. The men and women were African American (five), Asian American (one), Black African (one), Native American (one), and European American (two). These participants came from two levels of family income $ 0- $24K (nine) and $25K - $49K (one). Additionally, they reported that the marital status was divorced (three), separated (one), widowed (one), and single never married (five). I protected participants' information by replacing a letter P (for "participant") and a number (1, 2, 3, etc.).

Table 1

Demographics

Coded Name	Age	Income	Ethnicity	Marital Status	Gender	Level of education	Types of disability	length of time living in the area
P1	65	$ 0-24K	Black African	Separated	Male	High school	PI	15 yrs
P2	65	$ 0-24K	Caucasian	Divorced	Female	College graduate	PD/HI	18 yrs
P3	54	$25-49K	Caucasian	Widowed	Female	Masters	PD/HI/PI	13 yrs
P4	55	$ 0-24K	African American	Single	Female	7th grade	PD/ HI/PI	19yrs. 1 month
P5	65	$ 0-24K	Native American	Separated	Male	High school	HI	15 yrs
P6	54	$ 0-24K	African American	Separated	Female	High school	PD	20yrs, 4 moths
P7	65	$ 0-24K	African American	Separated	Male	High school	PI	15 yrs
P8	60	$ 0-24K	African American	Single	Male	3 yrs college	PD/HI	10yrs
P9	56	$ 0-24K	African American	Single	Female	11th grade	PD/PI	14 yrs
P10	59	$ 0-24K	Asian	Married	Male	GED	HI/PI	30

Physical Impairment (PI); Health Impairment (HI); Psychological Disorders (PD)

Participant 1

This participant was 65-years-old male, single, and of African descent. At the time of the study, this participant had lived in the United States for more than 30 years and was a naturalized citizen. He was retired. He lived in Rockaway Beach, New York, and his income was in the $0-24k range. This participant reported having a son who did not live with him. The son came to the shelter to visit him and provided financial assistance that helped the participant to shop in nearby stores for his preferred food.

The participant reported that during the time he stayed at the shelter he ate sandwiches regularly but said he did not enjoy eating that type of food. He stated that he never ate that type of food, and that the food served was not great. He said, “I am not used to eating sandwiches after sandwiches.” The participant reported that he was pleased when he came back to his residence. The participant stated that he had a “tough,” “rough” experience at the shelter. He stated that his sleeping and shopping routine changed right after his shelter allocation. However, he knew that he had no alternative but to accept the situation and find a way of adapting to the changes. He stated, “I had no choice.” This was an unfortunate experience that this participant hoped not to go through again. The participant was grateful for his survival and surprised to be alive.

He described his ordeal as a terrible experience, and he indicated that people would have to experience a situation like this before they could fully understand it. He indicated that, at times, he felt lonely in the shelter, but that he managed to take walks. Participants described feeling comfortable at the shelter. People felt that they were treated nicely. This was a nice experience, and the participants enjoyed it. This is something the participant described at different stages of the interview. There were beds for them to sleep on. On the other hand, participants narrated that it was scary going through the storm.

He attended adult care at the Center for Adults. This helped him to maintain his social skills and living skills. The participant had a medical condition that meant he had to take regular medication to stay medically stable. The participant indicated that, with everything that had been going on, he found it difficult to stick to his regimen. Overall, this participant was accommodating, as he knew that this was an emergency and that staying calm would help him to manage the situation.

Participant 2

This participant was a 65-year-old, divorced, female of Jewish descent. She did not work. She was a 3-year college graduate, interested in religious studies. She considered herself a prophet. The participant reported that she spent most of her time shopping with her girlfriends and studying theology. The participant expressed that she had lost many personal items and described the storm as a “disaster.” The participant lived in Rockaway Beach, New York, and her family income was in the $0-24K range. She indicated that there had been no significant changes in her activities since Hurricane Sandy.

The participant had some difficulty remembering what had taken place, as shown by her stating that she had been evacuated and taken to a shelter by FEMA, but later recollecting that she had in fact been in the hospital. For example, she failed to recall what had happened, and she stated, “I don't remember going to college, I cannot remember where I went. I think I went to the hospital and unsure of whether my residence was renovated.” The participant had no family to rely on, but she socialized with her friends and managed to continue living, regardless of having no family around. She was in disbelief, describing the storm as a “shocker” and a “disaster.” The participant also stated that she used calming techniques, such as facial cleansing, to calm herself and adjust to the situation.

Participant 3

This participant was a 54-year-old, widowed, European American female. The participant had a part-time job. She was a professor in a private center teaching credentials and continuing education (CE) credits. She lived in Rockaway Beach, New York. Her family income before taxes was in the $25K-49K range. The participant mentioned that she had two children (a daughter and a son). She found the hurricane stressful, as she had difficulty sleeping and she had to make changes to her medication.

This painful dilemma forced her to consult with other doctors regarding her symptoms of a lack of interest in daily activities, anxiety, irritability, isolation, and suicidal thoughts. However, this resulted in depression and her diabetes becoming challenging to control without medication. She expressed concerns about medication overdose and changed her dosage without consulting the doctor because she did not want to become addicted. She obtained medication without a doctor's approval. She indicated that she had suicidal ideation but denied having thoughts of killing herself. The doctors helped her to confirm whether her symptoms were related to PTSD.

Her strong will helped her to get out of whatever was hindering her to move on, such as, she started caring for her children because she did not want them to see her live in the manner that she was at that time. She focused on her eating behaviors. The participant mentioned that she ate “fruits and salad,” as well as taking “light walking exercise.” The participant's children were a support system. She enjoyed minimal recreational activities, but with free music concert tickets, newspapers, and teaching, to focus on getting better. Although she was not evacuated, she managed to find herself a hotel, where she slept for 3 nights. She went to concerts with her daughter. She realized that she needed to become stronger and eat healthy food to get better psychologically and medically, in the best interests of her children. She felt that her children depended on her returning to her normal way of living. As a single mother, she had struggled to care for her children, and she realized she needed to get stronger for them.

Participant 4

The participant was a 54-year-old, African American female. She was single but cohabiting with a significant other. The participant did not have a job, and she lived in Rockaway Beach in New York. Her income was in the $0-24K range. The participant felt nervous during the experience. She indicated that it was not easy. She stated, “I go to the door, and I tell my husband someone is at the door, but when the husband sees the door he finds nobody.” She mentioned that, since the hurricane, she has learned about preparing food. This participant had a medical condition that required her to take medication regularly.

She was grateful to the community pharmacy that supplied her with all of the medicine she needed at the shelter. Her attachment to others was also an influential factor that contributed to her ability to go on living and her efforts toward getting better following the hurricane. Additionally, her outgoing and friendly nature enabled her to get help from community members. However, she had no choice but to depend on others, as she experienced pain in her leg. She had an aide who came to help her with daily activities. She managed to go to church and attend Bible studies.

Participant 5

The participant was a 65-year-old, separated, Native American male. The participant did not have a job and lived in Rockaway Beach in New York. His income was in the $0-24K range. The participant described his experience as “distressful and “traumatic.” The participant managed to continue living after the hurricane, indicating that there was nothing else to do but to survive. He focused on continuing to sleep, bathe, and eat to get through the difficult time. The experience was “agony.” The participant said that he stayed in an unhealthy place and as a result, he had some medical complications that resulted in his hospitalization. He then encountered further distress at the shelter. Due to his medical situation, he became sick. The participant was happy to return to his residence. When he returned, he grew new plants, making the place look better and feeling proud of the achievement. The participant stated, “Like you live somewhere nice that does help the environment.” (Sic).

> That environment you see there it's a reflection of my room upstairs. In the cabinets, all those plants were made. I make them like babies cutting I let them grow. I open the window; it is like a forest in my room. It looks nice; I have lamps like those big lights (pointing at the tubes lights on the ceiling) I don't turn them on I don't like those damn bright lights. I'm trying psychologically fooling myself (sic).

He sterilized his room. He mentioned that this was a traumatic event but said that he was not affected psychologically. He was instead more concerned about those people who were out in the community and waiting to rebuild their houses. He stated, “Houses were destroyed, and many people are still waiting to rebuild their houses.” He was happy that his sight improved after going through several procedures. He was grateful to be alive despite his two heart attacks. He was supportive of others at the shelter, helping another person who experienced a grand mal seizure. He reported that he was not psychologically affected because he had had earlier hurricane experiences. The participant regretted the breakdown of his marriage and wished he could have done something to prevent it. The participant managed to overcome the hurricane, despite having no family support. He mentioned that he had no connection with his family at that point.

Participant 6

This participant was a 54-year-old, separated, African-American female. The participant did not have a job. She lived in Rockaway Beach in New York. Her income was in the $0-24K range. The participant described her hurricane experiences and how her activities had changed over time since the hurricane. She indicated that she had changed her hair, that some of her hobbies had changed, and that her life had not yet returned to normal. The participant had stopped taking care of herself in the way she had done before. She stated that she used to have dreadlocks but had had them cut off. She looked unkempt during the interview.

After the hurricane, she noticed some differences. She stated, “It is not like this anymore!” The participant mentioned that she no longer walks as she used to, but she wanted things to get back to normal. The participant had past exposure to storms, and that she had not panicked when Hurricane Sandy hit. She mentioned that she knew how to handle the situation. Although she had some experience with storms, she indicated that the situation was frightening because people had lost their lives.

Participant 7

This participant was a 65-year-old, separated, African-American male. The participant did not work. He lived in Rockaway Beach, New York, and his income was in the $0-24K range. He described Hurricane Sandy as “devastation.” He appeared more concerned about others than himself. The participant described his feelings about the people who expressed concern for him. He mentioned, “They made me feel little better, you know; someone seemed more concerned.” At the time of the interview, the participant looked like a person who would have required extensive help during the hurricane. He stated that he did not go out, and instead remained within the relatively safer area of his residence. During the interview, he indicated that he had hip pain and was unable to do a lot of walking, as his health insurance company had discontinued his physical therapy services.

The participant appeared unhappy. He indicated that he has nobody to talk to, which results in a depressed mood. He stated, “I don't feel like I have a daily life.” He does not communicate with anybody. He could not reach his family (his sister and daughter) because his phone was not working. The participant wanted to feel normal for example he stated, “Makes you feel more human or following stuff.” He expressed his awareness of evacuation procedures, indicating that everyone knew what they were going to do when told how and when to evacuate.

Participant 8

This participant was a 60-year-old, single, never-married, African-American male. The participant was unemployed. He lived in Rockaway Beach, New York. His income was in the $0-24K range. The participant encountered hardships during Hurricane Sandy. He stated, “We had to evacuate. The building had been torn down; something was wrong.” As a result, he relocated to a shelter. The participant described this experience as “nice” and “enjoyable,” as people at the shelter talked to him and were kind and took care of him. He stated, “We had no problem.” The participant received help to move on and manage his situation.

He recalled that the people provided help to each person, acting “nicely,” and said that these people were “helpful.” The participant went through a stressful experience when he lost his bank card. The participant indicated that he wanted to settle down in one of his residences. The participant indicated that he has a house in Harlem and Brooklyn. He mentioned going to stay in Brooklyn alone, but he stated that he would be happy if he lived with a “lady.” He was grateful and surprised to be alive. He described that the situation could have been worse, but everyone survived and there were no reported deaths or casualties.

Participant 9

This participant was a 56-year-old, single, never-married, African-American female. The participant was unemployed. She lived in Rockaway Beach, New York. Her income before taxes was in the $0-24K range. The participant experienced issues during the hurricane. She had to leave the place where she was located and move, which created problems. The participant became “afraid,” as one of her caretakers died in the process. The participant had mixed feelings during the hurricane. She also stated that she was a little afraid, but some people stayed back.

The participant had a medical issue that required medication; thus, getting medication helped her maintain her medical stability. She had some concern about taking medication, and she was worried about taking the insulin shot. She indicated that she would wake up during the night and ask the time. The participant sometimes had trouble differentiating between day and night. Probably this may have been due to the changes in weather, and the stressful experience she had suffered.

Participant 10

This participant was a 59-year-old, married, Asian male. The participant was unemployed. He lived in Rockaway Beach, New York. His family income before taxes was in the $0-24K range. The participant encountered issues at the shelter. For example, he had to leave the first place and move to a second shelter. This participant provided information that aided understanding of the challenges of Hurricane Sandy and its impact on people’s lives. The participant was open about his situation. During the interview, I could see his strength and the extent to which he believed in himself. Although he had self-belief, he saw himself as discriminated against, but this did not affect his survival. His earlier storm experiences perhaps prepared him to handle the situation well.

Living through the hurricane was not easy, but the participant's skills made it possible to survive without undergoing any major changes. He stated that he could not identify any differences in his life before and after the storm. He said that, as he was approaching 60 years old, there were things that he used to do as a teenager that he could not do anymore. That is why he did not see many changes; but at the same time, he stated that he was not used to the changes. His maturity seemed to have determined how he handled himself.

He stated that he needed help with showering, and someone to lead to him in the right direction. He needed to take steps toward better living, which contradicted what he said about not needing help and considering himself independent. He was unsure as to whether he continued to maintain the same things after the hurricane and if nothing had changed. He talked about not seeing life changes after the event, but his experiences had perhaps caused depressive feelings. Life was difficult, and all that he could do was looking at the window and wanting to go outside.

Data Analysis

I used the interpretative phenomenological analysis (IPA) to analyze and interpret the data collected from the recorded interviews. I utilized this approach because it guides exploration and draws out accounts of participants' life events. Furthermore, the method helps researchers to identify how people interpret their experiences, and it involves an investigative and analytical process (Creswell, 2013; Pietiewicz & Smith, 2014).

It is crucial for a researcher to manage their potential biases and identify any connections he or she may have with the topic of study. I addressed this issue before data collection. I work with people with disabilities. Therefore, to avoid any biases or connections, I identified and wrote down any of my potential preferences and opinions before participant recruitment and data collection, thus trying to maintain impartial during data collection and analyses. I outlined my professional and personal experiences and all feelings and beliefs I have on the topic of study. I also gave detailed study information to the potential participants before interviewing, including regarding informed consent.

The overall data analysis process included an initial step in which I transcribed the interviews, compiled the transcripts, and read them. Then, I reread all the interview transcripts to identify meaningful statements and phrases related to the participants' lived experiences during Hurricane Sandy, specifically those experiences associated with personal coping strategies and resilience. Later, I organized these important statements into clusters of common themes to create textural and structural descriptions of participants' lived experiences. In this way, I began to write composite descriptions of the experiences. The steps of data analysis are described next. While these steps are described as separate stages, it is relevant to mention that data analysis was an interactive process and these stages overlapped.

Familiarizing Stage

Initially, I transcribed the data obtained from the interviews into a written format as Braun and Clarke (2006) suggested. This process facilitated my understanding and getting familiar with the collected data; thus, acted as a guide toward the formulation of coding of themes. I transcribed the recorded interviews, which eventually developed into pages of transcripts. I produced a manuscript for each participant from the transcripts. After compiling all the information, I read the transcripts, and in the meantime, listen to the recorded interviews without reading the written texts.

Generation of the Initial Codes Stage

Each participant's code started with the letter 'P' (for participant). The participant's code also included a number, reflecting the order in which I conducted the interviews; thus, P1, P2, and so on. The first cycle of coding led to 478 codes. Although this was a high number, I was not concerned as I knew that these codes could easily be condensed. I used the right margin of the transcript to code all the initial data (Saldaña, 2013). In this data analysis, I actively formulated the codes that eventually evolved into themes during my qualitative analysis (Saldaña, 2013). According to Saldaña (2013), coding is subjective, and thus there is always room for interpretation during coding in qualitative data analysis.

The interview contained two central questions, the first looking at the participants' Hurricane Sandy experience, and the second, their coping strategies and resilience factors. Each participant responded to all the questions asked, and they each expressed how they had managed to overcome the aftermath of the hurricane. Table 2 shows a selection of various excerpts from the interviews regarding participants' insights, as embodied in the focused coding.

Table 2
Interview excerpts about participant's experiences

Interview Excerpts	Focused Coding

P.1 said: “Well it was more mind of the matter, but it was tough, and it was rough. I ended up at the place called York College for six weeks, and they experience I had there was lousy” but I had to deal with it, and I dealt with it the way I can.”	DIFFICULT EXPERIENCE DURING HURRICANE: DISLOCATION LOUSY EXPERIENCE AT SHELTER: SLEEPING ARRANGEMENT
P.2 said: “Oh yes I lost a lot of clothing, and it was a terrible experience we lost so many things we went to (what was that organization that helped us with four letters) huh.”	TERRIBLE EXPERIENCE DURING HURRICANE: LOST PERSONAL ITEMS
P.3 said: “It was you know I became afraid of this because I did not sleep well. After this always I had some kind of huh afraid of what will happen will I pass this day; What is going to happen the next day, but already passed this day overcome the day but I was afraid what will happen the following day.”	STRESSFUL EXPERIENCE: AFRAID
P.4 said: “ I was *huh*, all in all, it was really really really Scary.”. “… I rolled on the street it was scary site okay.”	SCARY EXPERIENCE DURING HURRICANE

Participant also expressed their coping strategies and resilience factors about Hurricane Sandy. Therefore, a selection of these interview excerpts is shown in Table 3.

Table 3

Interview excerpts coping strategies and resilience factors

Interview Excerpts	Focused Coding
P.1 said: **“**… I thank God that there was a roof over our house to sleep and facilities (*you know like (pause)* bathroom, nurses, and other care people who wear attending to ask but it was a lousy experience and I pray.”	COPING: RELIGION

"After because why it was a continuation from York College. So, I just followed up and I still continue to go there. I have been going there at least for three to four years because of Sandy had to be five to six years."	SURVIVAL: RECEIVED SUPPORT
P.2 said: "… Shopping and I am going to my girlfriend today. She wants me to pick up some stuff and their things I got for myself."	COPING: RECREATION
"…But we got over it."	SURVIVAL: ADAPT TO SITUATION
P.3 said: "Also, once per week and every Sunday they had free concerts of classical music, so we went with my daughter to these concerts. After I worn a ticket you had to fill in a questionnaire, I won the ticket for myself and my daughter. We went to free Opera (her facial expression changed to happy affect) even summer time metro Opera organized I think two weeks, I think was for ten days it was outside you put your chair outside and they give an opera book, but positive stuff I went out with my daughter. I think that was helpful to me."	COPING: RECREATION
"I just sit and concentrate on myself, but will have thoughts whether I will die, but I did not have thoughts of suicide though but somehow I had an idea as if it was the end of my life short. I cannot do anything, and nobody cannot help me but somehow, I tell myself I said to myself how I cannot stand to live like this. I have two children and right now I have negative experiences for my children they can put me in the hospital for them I concentrated. People do not need to pay attention for my physically disability for some reason, I had an idea in my brain that I had to do this."	SURVIVAL: DETERMINED
P.4 said: "…When Sandy came I prayed (talking in a low tone) and prayed Okay."	COPING: RELIGION
"…The Red Cross was able to give out blankets they gave out water, clothing and they said that there was a pantry. We made breakfast, but we just pulled it together."	SURVIVAL: RECEIVED SUPPORT

Sorting Stage

Following the coding stage, I created a codebook (DeCuir-Gunby, Marshall, & McCulloch, 2011; Fonteyn, Vettese, Lancaster, & Bauer-2008). I defined each code and I gave meaning to each code within the context of the data. I categorized and grouped the codes in a body of a column using different colors. For example, “attitude toward medication” (dark gray), “coping” (green), “difficult experience and dislocation” (turquoise), “distressing experience at shelter” (dark red), “experience during hurricane” (light gray); “grateful for help” (red), and so on. See the example of a code and its definition.

- *COPING: ADAPTATION: This code refers to the participant’s ways he managed to continue living after experiencing a hurricane. The participant stated that to live a person had to cope to ask God to give him or her strength to go on otherwise, the person might not stay there and die because for those people who did not managed through died. He stated, “Some people never came back here. In fact, a lot of people never came back here. They did not make it.”*

Then, I sorted different codes into a family of codes, and I arranged them to the related coded information in recognized issues. The goal was to help me with data analysis and consideration on how various codes might be compiled to get the central theme. The results were made up of three categories, each having their subcategories. I examined the data in order of interview. It made sense then to categorize data by time and life sequence.

Theme Creation Stage

After creating the codebook and sorting the codes into family of codes; I conducted second and third rounds of coding to adjust the labeling and meaning of the codes. The second round of coding enabled me to reduce the total number of codes to 46. Many initial codes were similar, if not identical, to others and thus could be subsumed by other codes, re-named under a different code, or dropped entirely. I logged them into a codebook, which included those from all the interviews. The third round of coding allowed me to identify three predominant themes, each with several subthemes. Based on my extensive analysis of the 10 verbatim interview transcriptions, and identified 46 relevant codes, three main themes emerged: Coping Strategies, Experiences during Hurricane, and Resilience. The results including themes and subthemes are presented below in the table section (Table 4).

To remain alert to negative case analysis, I paid attention to all inconsistent data, such as discrepancies in the details of the individual accounts, or variation in coding across participants. However, there were no major inconsistencies across the themes; the emergence of the three themes was strong and supported by all participants. Minor disagreements were incorporated in data analysis.

Evidence of Trustworthiness

Credibility

Credibility implies the congruency of the findings by describing reality (Creswell, 2013). I used prolonged engagement to ensure credibility. Prolonged engagement required to spend enough time in the field and gain an understanding of the phenomenon under study and its context. Research questions acted as a roadmap for data analysis. I collected extensive literature and background information to develop the conceptual framework Interviews focused on gathering extensive data directly from the participants. I used audiotape to make sure that all information necessary and vital to the study collected. I typed all the interview data verbatim from the audio recordings of the interviews. All received data were included in interview transcripts to ensure the integrity of each participant's responses. Verbatim transcriptions of all the recorded interviews were used as a data source. I consider that I reached saturation in data analysis. Finally, I worked on reviewing my biases, and I did not let those influence my analysis.

Transferability

As discussed in chapter 3, qualitative studies do not attempt to generalize results to broader populations like results from quantitative studies may do (Creswell, 2013). I used criterion sampling to recruit participants as I anticipated. Snowball sampling/ chain referral is a form of meaningful sampling that though the small sample is neither random nor generalize to a larger population; the data is likely to yield other research and provide education to relevant people. I provided information on the participants and their specific context. I have also provided an in-depth description of each participant; I have included adequate information that explains participants and their specific experiences. I think that the information the participants provided is detailed enough to represent the phenomenon under study. Data collected lead to data saturation.

I provided a thick and rich description of data and results with the expectation that the reader would be able to make decisions regarding the applicability and transferability of the results (Creswell, 2013). Therefore, there might be a possibility that peoples' stories are transferable to similar cases in similar contexts and circumstances. There is a high possibility that categories and themes emerged as a result of the analysis could be transferred to other people who have met similar situations.

Dependability

Dependability refers to the stability and consistency of research methods. Consistency, stability, and transparency are needed to ensure that a replication of the study with the same type of context, participants, and methods will result in similar findings (Creswell, 2013). To ensure dependability, I included adequate descriptions for readers to reproduce this study if desired. I discussed the research design, its implementation and gathering, collecting, and analyzing data. My dissertation chair, Dr. S. Verdinelli, peer-reviewed all verbatim interview transcripts.

Confirmability

I ensured that results of this study represented the responses of the participants and not my views or biases. Although I have extensive experience working with people with disabilities and with people with a range of psychological disorders, none of this influenced the way I conducted this study. However, I was able to understand the foundation the situation and the background knowledge helpful in designing this study, formulating selection criteria, and developing interview questions that can help to ask for reliable information about the study.

My data absorption started when I selected participant, then screening conducted the face to face interview, listened to the recordings during transcription and coding, proofread, re-read the transcripts to arrange codes and formulate themes/ categories meanwhile maintaining my neutrality. I collected and reviewed all ten interview transcripts; hence, assuring confirmability. Also, I enclosed a section in Chapter 3 that discusses the role of a researcher and my anticipated biases. I treated each interview with an open mind, and I had no biases that influenced after and before interview thoughts and during data analysis; thus, remained neutral throughout the process.

Results

There were two aspects of interest to this study as expressed in the two central research questions. The first question focused on obtaining information about the participants' coping strategies and resilience factors used to recover from the Hurricane Sandy experience, and the second question was for the participant to describe how they maintained their health and psychological well-being following Hurricane Sandy.

Coding and analysis of 10 participants' data from the verbatim transcriptions resulted in three themes: (a) coping strategies, (b) experience during hurricane, and (c) resilience factors (see Table 3). The themes coping strategies and resilience factors helped to answer the first research question, "What are the coping strategies and resilience factors people with disabilities used to recover from the Hurricane Sandy experience?" The second and third themes answered the second research question: "How did people with disabilities maintain their health and psychological well-being following Hurricane Sandy?"

Each of these three main themes had subthemes. The first theme, coping strategies, had the subthemes of recreation/relaxation techniques, attitude toward medication, and religion. The second theme, experience during a hurricane, included the subthemes of dislocation, emotional reactions (i.e., grateful for living, depressive mood, loneliness, and fear), and damaged infrastructure. The third and final theme, resilience, which refers to how people with disabilities managed to go through the difficulties the hurricane imposed, had two subthemes: receiving support and independence and self-determination.

Table 4

Developed Themes

Themes and Sub-Themes from the Interviews

COPING STRATEGIES

- RECREATION/RELAXATION TECHNIQUES
- ATTITUDE TOWARD MEDICATION
- RELIGION

EXPERIENCE DURING HURRICANE

- DISLOCATION
- EMOTIONAL REACTIONS
    - GRATEFUL FOR LIVING
    - DEPRESSIVE MOOD
    - LONELINESS
    - FEAR
- DAMAGED INFRASTRUCTURE

RESILIENCE FACTORS

- RECEIVING SUPPORT
- INDEPENDENCE AND SELF DETERMINATION

Themes

Theme 1: Coping Strategies

The overarching theme of coping strategies refers to how participant dealt with the stressful event of Hurricane Sandy. How people coped is reflected in the subthemes. That is, they coped thorough using relaxing techniques, reading, praying, watching movies, listening to music, and taking walks. They also coped through religion and having a positive attitude toward medication.

Recreation/Relaxation Techniques. This subtheme refers to what the participants used to help them through the challenges. Recreation and relaxation techniques refer to reading, shopping, and listening to music. Recreation dominated most of the participants' responses. They used recreation to cope with the challenges experienced after the hurricane. For example, Participant 1, managed to deal with the situation "second by second," and Participant 3 indicated that she used to buy newspapers daily and she read until she fell asleep. Also, she stated that she went to classical music concerts with her daughter. Participant 9 indicated that she coped by "shopping to the store, buying a cup of coffee, a bag of candy that I give out to the people; and I share my coffee with my friend." Participant 5 indicated that he spent time using the computer and gardening.

Attitude toward medication. Attitude toward medication was one of the first subthemes that emerged when participants described the coping strategies they used after Hurricane Sandy. In this study, attitude toward medication refers to the participants' feelings and concerns they had toward taking medication. It also refers to how participants took care of themselves by taking their prescribed medication and how participants looked for help through medication. Participant 1 explained that he managed to control his illness and prevent his glucose level from getting elevated by taking medication as prescribed. Participant 3 also described how the medication was a survival strategy, and she participated in other activities, for example, going to the movies, reading newspapers, and listening to classical music. Participant 7 stated that he took medication to relieve his hip pain.

Religion. This subtheme refers to how the participants used religion as a coping strategy, for example, engaging in prayers and going to church or bible studies. Participant 1 indicated that he thanked God for helping him get through the event and that he devoted himself to prayers. Participant 2 indicated that she went to church and prayed. She expressed her seriousness about faith and God and her attachment to faith. Participant 3 also thanked God for letting her survive the hurricane. She stated that God was on her side. Participant 4 indicated that she prayed; in fact, she repeatedly prayed when Sandy hit. Participant 5 indicated that he thanked God when he returned to his residence after a period of dislocation and when he came out of the hospital. Participant 8 mentioned that he had a bible and that he read it regularly. This group of participants used religion as a way of coping and believed God helped them through the challenges.

Theme 2. Experience During Hurricane

Analysis of the participants' transcripts indicated a wide range of experiences related to the aftermath of the hurricane. The experiences participants reported they were clustered in three subthemes: dislocation, emotional reactions, and damaged infrastructure.

Dislocation. The experience of dislocation was the most predominant among participants. After the hurricane hit, most participants were moved to a shelter. Dislocation denotes how participants were forced to live temporarily at the shelter. The experiences at the shelter varied. Participant 1 recalled his experience as a "tough" and "rough" one, and he hoped he would never have to go through it again. He stated that relocating to a shelter was a poor experience because he had to sleep in a gymnasium. He stated that one had to be present to understand what he was talking about. Participant 5 recalled this experience as "nasty."

In contrast, Participants 8 and 9 recalled their experiences as "nice" and "enjoyable." They reported that people at the shelter talked to them, were kind, and took care of them nicely. Participant 3 also said that she had a nice accommodation, which was at the hotel. Participant 8 indicated that he had no problem with the food served. At the shelter, he only had one choice of food, which consisted of sandwiches, and there was an opportunity to get extra if he needed one. This participant considered it a fortunate experience. Overall, participants did not like the experience of dislocation, but the specific shelter or place where they were relocated had an impact on their experiences and it colored their opinions.

Emotional Reactions. This subtheme refers to the various feelings and emotional reactions participants experienced after the hurricane. Most participants reported slightly similar feelings and experiences. Some participants encountered a mix of feelings including loneliness, fear, and depression. These feelings caused lack of sleep and loss of interest in everyday activities. Some participants became agitated and afraid. For example, Participant 5 appeared to have a negative experience. He stated that his experience was “nasty” and “scary.” Although, participants expressed these feelings of loneliness and depression, some of them indicated that they felt gratitude for surviving.

Grateful for living. Participants reported feeling gratitude or appreciation that they survived Hurricane Sandy. For example, six participants gave a synopsis of how they could not believe that they were still alive. Participants narrated how they survived the situation and managed to return to their routine. Participant 1 reported that the situation was not a good one, but he managed to get out of the place. Participant 1 reported that he was thankful to the Lord for helping him overcome life’s challenges.

Participant 1 continued to describe this ordeal as a terrible experience. Despite the challenges of dislocation, he was grateful for living. Participant 4 gave a synopsis of how she was surprised that she was still alive. Participant 5 called himself a “survivor.” This participant provided a summary of how he felt good for himself and others for living. He described this ordeal as a terrible experience, but none of his friends died. Participant 10 described that the situation could have been worse, but everyone survived; and there were no reported death and casualties.

Depressive mood. In this study, depressive mood referred to changes in participants’ attitudes that affected their everyday life following the storm. Some participants experienced symptoms such as isolation, lack of interest in activities, irritability, crying, social isolation, poor appetite, repeatedly going over thoughts, and sleeping disturbances, such as early awakening and/or restlessness. A few participants reported getting isolated while others experienced loneliness. Participants 1 and 7 described their challenges associated with lack of sleeping and loss of interest. Participant 3 provided the following account:

> It was very stressful. I became afraid of this because I did not sleep well. After the hurricane, I always was, huh, afraid of what will happen. Will I pass this day? What is going to happen the next day? But I already passed this day I overcame the day, but I was afraid what will happen the following day … First, it was my sleeping time; I couldn't sleep during night time or day time to compensate…I never take tablets to sleep. I had a natural way to go right to sleep…I was always afraid of a stroke if I did not change my blood pressure and doctor said he will need to increase the dosage of my medication and try to be calm. I became very nervous, I am a very calm person but at that time everything irritated me.

These participants survived by using independent skills, adaptation, and receiving assistance and support.

Loneliness. Participants described feelings of loneliness, especially when it came to find a resting place. As Participant 1 stated, "it was a gymnasium we were all spread out; I never slept like that and I had to go alone because I had no place to go and I didn't want to start complaining about this situation." Participant 2 expressed her loneliness as follows: "I was by my own at the hospital." Participant 3 stated that she was having her "brains back," thus causing her to get traumatized, which in turn, caused her negative feelings and hypertension. Participant 7, 8, and 10 stated that they were not communicating to anyone; and as a result, they experienced negative feelings.

Most of the participants described feeling lonely at the shelter as there were less activities to engage in, and some could not locate people to interact with. One participant mentioned that she took the effort to create friends; thus, she sat outside with the goal of making- friends. Participant 3 experienced loneliness and isolation; and it was not good for herself. She indicated that she decided to be around more people because when she stayed alone, she started thinking about the negative things that happened. However, at the time of the interview, things had got better. Participant 7 did not go out and he did not communicate with anybody, but sometimes he could meet with the therapist or the maid. He stated that he felt lonely.

Fear. Some participants mentioned being afraid. For example, participant 3 indicated that she was afraid of what could have happened to her as she expressed how she became stressed over going through each day. She indicated the situation was very stressful and she became afraid. Her fear affected her sleeping pattern. Participant 9 stated, “I was little afraid, but some people stayed back.”

Damaged infrastructure. This refers to the damages the hurricane caused. Participants stated that they encountered difficulties with roads and the buildings were torn down. Participants narrated that people’s personal belongings were destroyed because of the hurricane. Participant 2 narrated that she lost her belongings such as clothing and furniture. However, participants 5, 6, and 7 experienced a flood before and they felt better prepared to face the impact of hurricane Sandy. They used similar skills they used previously to deal with the storm. As a result, they did not panic when Hurricane Sandy hit their area.

Theme 3: Resilience

This third theme sheds light on the diverse ways in which people survived the phenomenon. The third theme helped to answer the second research question, how people with disabilities maintained their health and psychological well-being following Hurricane Sandy? Subcategories were created to indicate the varied, vital experiences, and survival skills the participants utilized. Subthemes included receiving support, and independence and self-determination. Receiving support and independence and self-determination were the most frequent experiences the participants reported.

Receiving support. This subtheme refers to the assistance participants received during the hurricane. The support received was emotional, professional, and financial. This is something the participant described at different stages of the interview. For example, participant 2 mentioned that they received help from FEMA. Participant 4 stated that she received help from neighbors, and participant 6 mentioned that workers drove her to the shelter. Participant 8 mentioned that workers helped, and he received financial support from different people.

Participant 4 received help from other people, we came together with my neighbors and prepared our food we cooked so that we were all to eat because we had to eat something. We were able to do that. The Red Cross gave out blankets, water, clothing and they said that there was a pantry. We made breakfast, but we just pulled it together. It was Scary you had to be there. Participant 4 continued to say he received help with medications, “the man works at the pharmacy, he knows us and if you didn't have medication he gave us extra of what we needed; this way we weren’t badly off.”

Participant 10 mentioned that he was transported to the shelter, received accurate directions when the lights went out at the shelter, and he was taken for shopping. Additionally, some participants received professional care. The community services helped participants manages the situation. For example, participate 5 indicated that he received aids at the shelter that helped attain his essential needs as desired. Participant 2 and 4, stated that they had personal aides who came to their residences. Participant 8 also related that he received help. He indicated that the volunteers, care aides and health professional workers that provided the help were as very nice.

The emotional support came from interactions with family members or friends. Participants narrated how their interactions with either their family members or people in the community facilitated their survival. Participant 3 stated that she interacted with her daughter, she continued to say that she managed to meet people in the community who recognized her positive and vibrant attitude and their compliments facilitated her self-confidence. Participant 7 managed to communicate with his sister; though sometimes the phone could not work for him to call the sister.

Independence and Self-determination. This subtheme refers to the inner skills that helped participants go through the critical moment of the hurricane and after it. They showed strong self-determination and independence skills. At least four participants had somewhat similar views on how they accomplished their tasks and moved on with their lives. Participant 5 stated that he completed tasks independently; and thus, requires no assistance meeting his daily living. Participant 8 mentioned that he was willing to move on. He stated that he could take care of himself and that he did not need his brother to stay with him at his residence.

Participant 5 narrated how he managed to live without assistance. He stated that he used to do his things independently, so he did the same when going through a hurricane. Participant 7's self-reliance skills, also helped him to manage as he did not need anybody else. Participants indicated that the situation forced them to adapt quickly. Additionally, other participants managed to adapt to the new structure following the hurricane. Participant 4 narrated that she managed to go through the situation and she continued to maintain her welfare. Participants 5 and 10 mentioned that when they came back to their homes, they had to adjust again, and they did not take long to adapt to the new ways.

Participant 5 indicated that there was nothing else to do but survive. He indicated that it was a difficult moment. The experience was described as "agony." Participant 1 mentioned that he had a "lousy" experience at the shelter, and with the help of the Center for adults he dealt with the situation, the best way he could. On the other hand, other participants set goals to help them continue to survive. For example, participant 3, expressed that positive thinking and strong determination influenced her living a normal life again. She was confident that regardless of the challenges she went through, she was determined to use her survival skills to help her continue living a healthy life.

Additionally, participant 8 narrated that he did not need anyone's help as he experienced no fear. He stated that he took care of himself and he could face the world without fear. Participant 6 indicated that she did not depend on anyone to meet her needs; thus, she was self-reliant, and she managed to go through the hurricane challenging experience.

Summary

In this chapter, I described the data collection approaches, coding, and data analysis methods I used to analyze participants' responses in this qualitative phenomenological research study. I conducted the semi-structured interviews through face-to-face recorded interviews with ten selected participants who met the criteria for the study. Throughout the interview process, and data collection, I consulted with the IRB approved requirements, which helped me to make sure that I stayed neutral and respected the participants during the contact, reviews, signing of the consent forms, and giving out of the incentives.

Throughout the process, the participants appeared satisfied and I received no complaints. They were all pleasant and participated fully, providing the requested information or discussing their experiences willingly. Some were kind and shared information about the research with relevant people who they knew, some of whom contacted me, and for others, I followed up. All the interviews were transcribed verbatim, and I proofread, manually focus-coded, and systematized the data into themes. I worked diligently to summarize documents and ensure that the codes systematically and precisely reflected the obtained data.

Three main themes arise from data analysis. The first addresses the first research question and the second and third for the second research question: (a) coping strategies,

(b) experiences during the hurricane, and (b) resilience factors. The findings suggest that female and male participants had similar experiences and used almost identical coping strategies and resilience factors to overcome the challenges they faced, regardless of their ethnic background or socioeconomic status. Several participants indicated recreation /relaxation techniques as their primary coping strategies and independence and self-determination as the dominant resilience factors in helping them manage their distress caused by the hurricane. Many of the participants found ways of continuing to live after such a terrible, frightening experience that included medication, and received support from families and community services.

I initiated the study following the granting of IRB approval. I followed the IRB requirements in their entirety. The primary goals were to safeguard the participants' anonymity from the beginning to the end of the process, including data transcription and coding. I secured the data on a password-protected computer and locked the filing cabinet with a padlock. I will publish the results of this study in professional peer-reviewed journals, after getting the approval of my committee and the university research office. The findings of this study will also be summarized and made available to all the participants, upon request.

Chapter 5: Discussion, Recommendations, and Conclusions

Introduction

Hurricanes are a growing environmental phenomenon. Furthermore, hurricanes affect the lives of people with disabilities in ways that people without disabilities might not experience. People with disabilities comprise a sizeable portion of the U.S. population. In 2013, the percentage of the U.S. population aged between 18 and 64 who reported a specific type of disability was as follows: hearing disability, 2.1%, vision disability, 2%, cognitive disability, 4.4%, ambulatory disability, 5.3%, self-care disability, and 1.9%; the proportion of people who lived alone was 3.7% (Stoddard, 2014). As this study showed, hurricanes possess considerable physical and psychological challenges to people with disabilities.

People with physical, health, and emotional disabilities need to become more resilient to stress and trauma caused by a natural disaster, especially a hurricane (Fox et al., 2010). In my review of the current literature on hurricane disasters and people with disabilities, however, I identified that there had been limited research on the impact of hurricanes on people with disabilities. Considering this gap in the literature, I explored and described the coping strategies and resilience factors that people with disabilities needed to draw on to recover during and after Hurricane Sandy. Additionally, I explored how people with disabilities maintained their health and psychological wellbeing following Hurricane Sandy.

I used the phenomenological qualitative research method to gain insights into the lived experiences and feelings of people with disabilities following Hurricane Sandy. I selected this approach because it aligns with the focus of the study, which was to describe life experiences. I focused on two key aspects of living through a hurricane as a person with a disability: (a) coping strategies and (b) resilience factors. Coping strategies included strategies that people with disabilities used to recover from Hurricane Sandy; resilience factors addressed how they managed to maintain their health and psychological wellbeing after the hurricane. Ten participants volunteered to participate in this study. They represented an ethnic cross-section of the New York City boroughs. The perceptions of these participants generated insights into the following three areas:

- The ability to cope with emergencies when forced to move to shelters,
- The ways of survival,
- The overall experience of the entire ordeal.

Using a semi structured interview approach, I recorded and transcribed interviews that focused on physical health and psychological disabilities, as well as the general state of health. The 10 participants in this study were selected using Patton (2015)'s criterion-based sample of suitability. I described the entire recruitment process and the research methodology in Chapter 3. In Appendix B, I show the two primary research questions with the subquestion that guided the interview process, and with Appendix C, I illustrate the screening procedure for study recruitment.

Chapter 5 begins with the interpretation of the findings, which is organized according to the themes that emerged as results in this study. These themes are contrasted with major related topics and findings identified in the literature. I then discuss the boundaries of the study, followed by the implications for positive social change. Last, I present recommendations for action and further research. I close with a summary of the conclusions**.**

Interpretation of Findings

In this section, I review the themes identified in the previous chapter and connect them to the existing research. The identified themes confirmed and extended knowledge about how persons with disabilities managed to overcome the challenges that natural disasters imposed. Findings in the current literature support the results of this study.

Coping Strategies

The participants were asked to identify the coping strategies they used following Hurricane Sandy. These questions were designed to gain insight into the participants' coping strategies and how the strategies facilitated each person's welfare. The first theme, coping strategies, included the subthemes of religion, attitudes toward medication, and recreation and relaxation techniques. Coping strategies were used to manage and regulate the situation, thus helping participants to continue living that stabilized their welfare.

The coping strategies theme is represented in the existing literature. For example, Salloum and Lewis (2010) found that people who used adaptive coping strategies such as engagement in distractive activities like working, listening to music, exercising, or seeking religious or spiritual guidance were significantly more successful in dealing with traumatic conditions. Similarly, in this study, the participants adapted to the impact of the hurricane by using recreation and relaxation techniques such as reading, shopping, or listening to music. These strategies helped them to focus on the manageable aspects of life.

Religion. The use of religion emerged as a coping strategy. The use of religion to cope with disaster-related stressors is empirically supported in previous research. Hence, religion frequently appears in the literature as described in studies developed by Drach-Zohavy and Somesh (2014), Fendrich (2017), Vigil and Geary (2008), and Salloum and Lewis (2010). In my study, community emotional support was a factor in helping participants to continue living after the hurricane. Similarly, Afifi et al. (2012) suggested that people's connection with and engagement in spiritual support or other community resources following a natural disaster could facilitate a person's ability to recover quickly and lead to taking responsibility for adopting healthy behaviors.

In discussing how the survivors used coping strategies to adjust to the situation, the participants in this study explained how they used religion, recreation activities, and relaxation techniques to control the situation and manage their welfare. A survivor's coping strategies consist of interaction with others, engagement in recreation activities, and faith (Renard & Snelgar, 2015; Salloum & Lewis, 2010; Welsh, 2014). The participants in this study further explained how using religion provided them with a sense of acceptance, which was a common theme in the existing literature on natural disasters (Fendrich, 2017; Fox et al., 2008; White et al., 2010).

Recreation and relaxation activities. The participants in this study reported using recreation activities and relaxation to deal with the impact of Hurricane Sandy. Bonanno (2004), Fendrich (2017), and Vigil and Geary (2008) also found that the use of recreational activities and relaxation were helpful strategies to reduce post natural disaster stress. This finding was irrespective of people's ethnicity or socioeconomic status. Wahl-Alexander and Sinelnikov (2013) asserted that people should have a chance of sharing, talking about their experiences with others, and having suitable ways to coping with the traumatic situation. Emotional stress reduction techniques, such as art therapy and group therapy combined with proper physical activity, are essential strategies to help people feel relaxed after a natural disaster.

Experience During the Hurricane

Participants' reported experiences were organized into three subthemes: dislocation, emotional reactions, and damaged infrastructure. In this study, the experience of dislocation was predominant among participants, and the majority reported that the experience was distressing. Some participants who moved to a temporary shelter were unable to access the walkways into the buildings, especially those who were using wheelchairs and rolling walkers. Schwartz et al. (2015) found a connection between displacement and the emerging symptoms of PTSD. In this instance, people who stayed at a temporary shelter were more at risk for PTSD than were those who lived with friends or family or in a hotel.

The shock and changes that occurred after the hurricane led to a range of emotions; participants particularly reported experiencing depressive mood, fear, and loneliness. Schwartz, Rothenberg, Kerath, Liu, and Taioli (2016) indicated that people's exposure to Hurricane Sandy was significantly associated with high risks of psychological problems and symptoms related to PTSD, such as anxiety and depression.

Schwartz et al. found that Hurricane Sandy had a psychological impact on the people living in Rockaways and suggested the need for sustainable recovery efforts and increased mental health resource provision in such a hurricane exposed area.

In addition, Schwartz et al. (2015) found that people affected by Hurricane Sandy reported high levels of psychological problems and were more likely to experience anxiety, PTSD, and depression after the hurricane. Therefore, Schwartz et al. suggested recovery and prevention efforts to focus more attention on mental health-related matters among the storm affected survivors. There was a high incidence of PTSD that rose from 15% in just a month after the hurricane to 21% a year later (Kessler et al., 2008). Experiencing a hurricane is likely to lead to subsequent psychological problems such as depression and PTSD for some people.

A hurricane or natural disaster is likely to generate emotional turmoil. Although most people affected by storms may function normally, some people may experience temporary symptoms such as nervousness, trouble sleeping, and sadness connected to the impact of the hurricane (Boscarino et al., 2014; Scutti, 2017). However, when such temporary symptoms affect a person’s daily functionality, then that person needs to look for assistance. The participants in this study echoed how they experienced challenges with receiving mental health treatment because their health care insurance would not cover psychological therapies. One participant reported experiencing emotional distress and feeling isolated and afraid, but she could not participate in the recommended treatment due to healthcare benefit coverage limitations.

Findings from research on people with disabilities and hurricanes showed that limited access to psychological, social, or medical resources resulted in increased emotional distress (Stough, et al., 2015). Ruskin et al. (2018) stressed the importance of making medical care more available to people with both chronic and acute illnesses during a natural disaster to help their physical and psychological needs.

At the time of the interviews, many participants indicated that they were doing much better and that they thought that they had recovered from their experiences of distress. Some participants described the post-hurricane experience as “very distressing,” and others reported that they were still experiencing loneliness because there were very few people to interact with. Although the United States has advanced health facilities to provide psychotherapy benefits to people with disabilities, research revealed a need for the development of international nongovernmental organizations and increased provision of better therapeutic services primarily in the United States (Ha, 2016).

Brown et al. (2015) suggested that research on the experience of evacuating people with disabilities was impacted by decision-making and adequate planning, support, communication, and supplies. Brown et al. stressed the importance of developing contingency plans for environmental disasters and has illustrated the significant implications of such plans for people with disabilities, particularly in terms of their safety and provision of professional care to aid them during and after hurricane disasters. In this study, two of the participants indicated that their self-disaster planning and preparedness significantly improved the way they handled the entire situation. These participants spoke about their prior exposure to hurricanes and reported that such experiences prepared them to know how to flee and survive; one participant talked about the pleasant experience of food, care, and living at the shelter.

Resilience

Resilience was the third theme that reflected the participants' perceptions of Hurricane Sandy. This major theme reflected how the survivors of Hurricane Sandy reported the means they used to maintain their health and psychological well-being following its occurrence. Wang et al. (2015) defined resilience as a process of "overcoming the adverse effects of risk exposure, coping successfully with traumatic experiences, or avoiding the negative trajectories associated with risks" (p. 354). The skills of regulating strong feelings and desires, building confidence, expressing needs, solving problems, and formulating attainable goals and executing them were considered resilience factors that help people overcome adverse effects (APA, 2018).

Furthermore, Bonanno (2004), Southwick et al. (2014), Svetina (2014), and Welsh (2014) stressed that resilience is a person's capacity to maintain a constant and reliable level of emotional and physical functioning following exposure to unsettling events, such as natural or human-made disasters and the ability to sustain procreative capabilities and positive feelings. In other words, a person's characteristics influence his or her ability to overcome difficult situations (Svetina, 2014; Welsh, 2014).

Results of this study indicate that the most relevant resilience skills that helped participants overcome the adverse post-hurricane effects were independence, determination, and receiving support. Most of the participants mentioned various ways in which their families and professional caregivers provided for their psychological and social support needs. Participants received social, emotional, and financial assistance from different community nongovernmental organizations, volunteers, and local and state agencies. This support was used to attend to their physical and emotional needs and to rebuild their houses. Also, such support helped the people cope with their emotions through building familial and community group support systems (Fox et al., 2010; Willingham, 2018). These findings are consistent with Fendrich's (2017) dissertation results. Fendrich analyzed resiliency after hurricane Katrina and indicated that factors such as support group and family, coping strategies, and family and education had an impact on people's resiliency.

Theoretical Framework

This study looked at two aspects, resilience factors and coping strategies, each with its strand of corresponding literature. I used one theoretical orientation to support the design of this study. I chose the resilience theory, given its attention to the emotional ways of handling stressful experiences (Welsh, 2015). The theory stresses that a resilient person can encourage feelings in themselves that help in surviving traumatic circumstances (Miller-Lewis et al., 2013; Svetina, 2014; Windle, 2011).

This theory suggests that people can utilize extended networks such as families, organizations, societies, and cultures to make changes in their lives after experiencing a traumatic event; the theory adds that support networks are likely to help regulate how a person can regain stability following a stressful experience. Hence, this may lead to a person's recovery and emotional welfare (Southwick et al., 2014; Wang et al., 2015; Welsh, 2014). Taormina (2015) has considered four factors that influence resilience: (a) determination, (b) endurance, (c) adaptability, and (d) recuperability. I discuss each of these factors and how they fit with the results of this study.

Determination

According to Taormina (2015), determination refers to resolution and persistence toward goal attainment or overcoming a challenge. The findings of this study cohere with this factor, given that at least four participants mentioned determination as a survival technique. For example, some participants indicated that they could take care of themselves no matter what they were going through and that they had to survive and go on with their lives without others' support.

Endurance and Adaptability

Endurance is the strength and courage a person must have when dealing with challenging experiences (Taormina, 2015), which can be either cognitive or physical. Adaptability, on the other hand, is the flexibility and ability of a person to handle stressful situations while learning to regulate and adapt to environmental modifications. In this study, I found that people knew and understood that they needed to change to fit into new situations, regardless of whether they were ready to do so. Findings indicate that participants' survival evolved adaptation. Participants indicated that they adjusted their ways and ensured that they continued living, regardless of the surrounding circumstances. For example, nine people who relocated to a shelter had to adapt to the new conditions concerning food, sleep, care services, and other residents' behaviors at the new locations.

Recuperability

Taormina (2015) stated that recuperability involves learning and understanding how to emotionally and physically recover from different types of injury, obstacle, or problem, which allow one to return to his or her previous condition. Taormina asserts that resilience depends on a person's assumptions of returning to the stress-free lifestyle that he or she enjoyed before a disaster. In this sense, people's survival knowledge plays a significant role in the implementation of self-care skills, which can eventually facilitate their recovery. Thus, something that emerged in this study findings (see Taormina, 2015).

For example, participants survived and adapted to the new situation by implementing relaxation techniques and engaging in recreational activities. In sum, the data obtained from this study is consistent with the resilience theory, mainly because the participants stated that they utilized extended networks (e.g., families, organizations, and community resources) to make changes in their lives after experiencing Hurricane Sandy. Participants in this study developed survival techniques and used coping strategies that helped them continue living, regardless of the challenges they were encountering at that time. Some people had to make difficult decisions, mainly because they realized that they had no other choice and could not exercise control over the services other than accepting the situation and adjusting to it as it was unfolding. Therefore, the stressful situation triggered the development of resiliency and coping strategies.

Limitations of the Study

This study has some limitations that can be used to guide future research studies on post-hurricane coping strategies and resilience factors among people with disabilities. One of the limitations of the study is related to the transferability of results. Results of this study may not be applied to people with disabilities in residentially supported facilities as they are more likely to receive adequate evacuation services than the people living alone, which was the case of my participants.

As discussed in Chapter 3, this study was expected to be limited to people with disabilities, affected by Hurricane Sandy living in the New York City boroughs. Several people were willing to share their experiences; however, some people were unable to travel to the designated location at the library. Thus, I added more time for traveling to secure a noise-free place where people could not interrupt the interview. I managed to meet these people at a safer and quieter neighborhood convenient to them. With this change to the data collection arrangement, I was able to meet all the ten participants who now live near the heavily hit areas where these people reside. The last limitation concerned the time that passed since Hurricane Sandy hit. I anticipated that there could be issues with participants' remembering details. One participant had difficulty recalling details of what had happened.

Recommendations

It is crucial for future research to undertake extensive research on coping strategies among people with disabilities following hurricanes to guide future survivors on appropriate action plans (Fox et al., 2010; Mohey & Fobes, 2009; Svetina, 2014; Wagnild, 2009; White et al., 2008). This study agrees with Cohen et al.'s (2010) idea that, without flexibility and survival skills, people with disabilities are likely to experience difficulties overcoming the impact of a natural disaster. Therefore, additional research is needed to explore people's self-care processes as a coping strategy for survivors of hurricanes. In short, learning from studies of this nature would improve living methods for people with disabilities following storms (Cohen et al., 2010; Ferguson et al., 2004; Leytham & Powell, 2012; McGuire et al., 2007; Rehnsfeldt & Arman, 2012; West et al., 2012).

As I discussed previously, this study focused on the participants who were able to communicate and speak in English. These participants provided information that helped create themes to identify what people did following Hurricane Sandy. Therefore, to validate the transferability of the emergent themes from this study, more research is required to explore survivors' experiences and coping strategies within a broader spectrum of persons with disabilities. For example, more research can be conducted on people with disabilities living in residentially supported facilities or living with their families. Participants in this study were at a lower SES, most of them completed up to high school, and they ranged from 54 to 65 years old. More research can be conducted on people with a variety of demographic profiles and ethnic backgrounds.

Implications

The phenomenological nature of this study permitted the exploration of how the participants recounted their experiences of Hurricane Sandy and how they coped with the challenges. This study's findings suggest that the provision of continued support and healthy coping strategies for people in similar distressing situations is essential; hence, there is also a need for health-care programs to provide continuous services to help survivors develop more effective strategies, which would help them manage recovery following hurricanes.

The studies that intend to investigate the topics explored in this study should first concentrate on the differences between people with and without disabilities affected by hurricanes. This study focused on the recovery process of hurricane survivors; the coping strategies and resilience factors of survivors have several implications for improving support services. Through this study and others, religion was found to be an essential coping strategy to enhance people's living and support systems to provide emotional support for people who were recovering from the hurricane (Fox et al., 2010).

With this finding in mind, health care and community resources should consider establishing professional psychotherapy services to benefit people in need of individual or group therapy (see Hardesty, Khaw, Ridgway, Weber, & Miles, 2013). It is crucial to understand people's challenges and service provision should be readily available during the crisis moment and after it. Resources and treatment should be made available to vulnerable people with mental health problems to address the long-term effects of hurricane exposure. Particularly, it is known that PTSD could be a disorder that prolong and have long-term effects. Considering the number of people who mentioned religion and recreation/ relaxation techniques as coping strategies, it is important to view these coping strategies as recovery techniques.

In the face of hurricanes, their factors, and distressful consequences on a global level, it is vital to understand the essence of people's concerns. Current research illustrates a high level of survival skills among people. Finally, the theoretical framework of this study provided a compelling vision of coping strategies and resilience factors for people with disabilities. The resilience theory was not only associated with the purpose of this study but also linked to the findings of this study. Given the successful application of these views in this study, the suggested guidelines might be effectively applied in future studies and in policies on sustainable health-care services for disasters to help people receive continued psychological services.

Conclusion

This study explored coping strategies and resilience factors among persons with disabilities who overcame the impact of Hurricane Sandy. I interviewed people who shared their experiences without hesitation. The participants elaborated on the importance of drawing on healthy coping strategies and monitoring their diets, doing exercises, and going to church as support activities for maintaining well-being and sustaining recovery. The participants whom I interviewed for this study shared their survival techniques, which can benefit other people who experience hurricanes. Therefore, there is a need to advance our understanding of coping strategies and resilience factors toward facilitating the recovery of people with disabilities who sustain post-hurricane trauma. We also need to deepen our understanding of how hurricane survivors can have better access to psychotherapeutic services and how individual or group therapy can influence their attitudes, which would consequently facilitate these people’s pathway to recovery. In brief, I hope that the findings of this study will benefit other hurricane survivors with disabilities.

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Appendix A: Demographic Questionnaire

Demographic Questions:

1. What is your age?

☐ 18 to 24

☐ 25 to 34

☐ 35 to 44

☐ 45 to 54

☐ 55 to 64

☐ 65 to 74

☐ 75 or older

2. Which of the following best describes your current relationship status?

☐ Married

☐ Widowed

☐ Divorced

☐ Separated

☐ In a domestic partnership or civil union

☐ Single, but cohabiting with a significant other

☐ Single, never married

*3. What is your ethnicity? (Please select all that apply.)

☐ American Indian or Alaskan Native

☐ Asian or Pacific Islander

☐ Black or African American

☐ Hispanic or Latino

☐ White / Caucasian

☐ Prefer not to answer

☐ Other (please specify)

*4. What is your Disability Status?

☐ Visual Impairment

☐ Hearing Impairment

☐ Cognitive Disability (e.g ADHD

☐ Psychological /Emotional Disability (e.g Depression

☐ Physical /Health Impairment

☐ Other

5. About how long have you lived in this neighborhood?

Years

Months

6. Where you displaced after Hurricane Sandy?

☐ Yes

☐ No

7. Did you have a disability before Hurricane Sandy?

☐ Yes

☐ No

8. Which of the following categories best describes your employment status?

☐ Employed, working full-time

☐ Employed, working part-time

☐ Not employed, looking for work

☐ Not employed, NOT looking for work

☐ Retired

☐ Disabled, not able to work

9. What is your approximate average household income?

☐ $0-$24,999

☐ $25,000-$49,999

☐ $50,000-$74,999

☐ $75,000-$99,999

☐ $100,000-$124,999

☐ $125,000-$149,999

☐ $150,000-$174,999

☐ $175,000-$199,999

☐ $200,000 and up

10. What is the highest level of education you have completed?

Appendix B: Research Questions and Semi Structured Interview

RQ1: What are the coping strategies and resilience factors people with disabilities used to recover from the Hurricane Sandy experience?

1. Please describe your experience after Hurricane Sandy.

a. **Probe.** What consequences you experienced because of Hurricane Sandy?

2. How did you cope with challenges experienced?

3. What did you find helpful in dealing with challenges?

4. Are there areas of self -care you focused on more than others?

5. Describe any self-care area (Physical, Psychological, and Spiritual) you used more.

6. Describe the plan for taking care of yourself after this hurricane?

7. How did your thoughts influence how you felt in self-care you identified?

8. How did your feelings influence your actions or behaviors?

9. Describe what you could have done differently to improve the outcome of the condition you were experiencing at the moment

RQ2: How did people with disabilities maintain their health and psychological well-being following Hurricane Sandy?

10. Describe how your daily activities changed right after Hurricane

11. Please describe what you did to return to your previous routine.

12. Please describe your experience of managing daily life after Hurricane sandy?

13. Describe how you dealt with this unexpected life changes.

14. Describe your personal characteristics that helped in recovering from the hurricane’s impact.

Appendix C: Message to Contacts for Participant Recruitment

Dear Mr/Mrs/Ms: _________

I hope this message finds you well. I am currently in the dissertation (research) portion of my doctoral program in clinical psychology at Walden University. I am currently in the process of recruiting participants for my dissertation and I am hoping you can help me. I am looking to recruit people between the ages of 18 and 65 with a disability who were impacted with Hurricane Sandy within the New York boroughs. Potential participants must be verbal, able to articulate words, speak fluent English and their speech must be easily understood. I will be interviewing these people for about 90 minutes and so and ask them questions about their disabilities, their experiences with Hurricane Sandy, their stress management during and after the storm, and about their current daily living.

I am looking to recruit a total of 10 people for this study. If you know of anyone who may fit these criteria and who may be interested in participating, I ask that you contact me back with their contact information. I ask that you do this in a private phone call or text message so that their privacy is ensured if they participate. Providing me with their name to contact them via e-mail, or their cell phone number is fine. Whatever method of communication you believe is best for this individual is fine for me. There will be $20 compensation for participation and complete the study. Additionally, you will be given a 1-2-page summary of the study results. I will give all participants much more information about the study once I speak with them personally.

I appreciate you taking the time to read this message and helping me out if possible. Even if you do not know anyone personally but may know of others who know people, I would appreciate it if you could let me know and I will reach out to them as well. If you have any questions, please feel free to contact me back.

Thank you so much.

Sincerely,
Miriam Mukasa, MSW