PUBLIC RELATIONS, PREPAREDNESS, AND THE TRANSPORTATION DISADVANTAGED IN A POST-DISASTER ENVIRONMENT

BY

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DISSERTATION

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Abstract

This dissertation examines the effectiveness of a public relations campaign that, during the 2010 hurricane season, sought to enhance disaster preparedness among two transportation disadvantaged groups in New Orleans: vehicle-less individuals who rely on public transit and individuals with mobility impairments who rely on paratransit. I assessed the effectiveness of the campaign in two ways. First, drawing from the ideas in the Protective Action Decision Model, I interviewed the transportation disadvantaged in New Orleans to determine whether they were receiving the message of the campaign, paying attention to it, and comprehending it. I also interviewed them to learn if they were engaging in risk identification (recognizing that a disaster threat exists), risk assessment (recognizing that the threat can affect them personally), protective action search (searching for ways to address the threat), protective action assessment (comparing a way to address a threat with other methods), and protective action implementation (taking steps to actually prepare for a disaster).

A second way I assessed the campaign was by querying, via email, officials familiar with how the campaign was being run. I asked these officials questions aimed at finding out whether the campaign was being conducted in a way that matched the Excellence Theory of Public Relations’ recommendations on how campaigns should be organized at the program, department, and organizational levels. I also reviewed websites and research reports to learn more about the campaign.

The dissertation’s major findings were as follows. The majority of the transportation disadvantaged in New Orleans were receiving, paying attention to, and comprehending the message of the campaign. However, receiving, paying attention to, and comprehending were not shown to automatically translate into high levels of risk identification, risk assessment,
protective action search, protective action assessment, and protective action implementation among the participants. Whether people had experienced a disaster in the past was not found to be a useful predictor of whether people engaged in risk identification, risk assessment, protective action search, protection action assessment, or protective action implementation.

In regards to public relations excellence, the campaign was found to exhibit excellence at the program and department levels. At the program level, pre- and post-campaign research was found to be a core part of the campaign. At the departmental level, the campaign was found to possess several characteristics of excellence including staff working in an integrated unit and campaign managers being able report directly to senior executives in the city of New Orleans. At the organizational level, however, the campaign was found to be within an organization that lacked excellence. Although structurally, the city government was organized in a manner to promote excellence, obstacles were found that made excellent public relations difficult. The findings regarding excellence should be treated with caution because participation by leaders familiar with the campaign was limited.
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CHAPTER 1. INTRODUCTION

This dissertation is a study that examined a public relations campaign that sought to enhance disaster preparedness among two groups in New Orleans: residents who lacked personal vehicles and residents with mobility impairments. This chapter explains the background of the study, the problem that was examined, the study’s significance, and the methodology that was used. It also outlines the study's delimitations and explains how the rest of the dissertation is organized.

Problem Background

A challenge facing many cities is how to effectively communicate disaster preparedness information to their residents. Cities are often vulnerable to disasters due to their proximity to large bodies of water, earthquake fault zones, and other hazards. In urban areas, many people often live in substandard, crowded dwellings that are dangerous during a disaster. Cities vulnerable to natural disasters have addressed the risk of catastrophe in two primary ways. The first is by trying to minimize hazards through mitigation. Mitigation includes activities such as moving people out of flood zones, constructing stronger housing, halting construction on beaches, curbing deforestation, and building sea walls. Mitigation is difficult because it requires addressing complex social and economic problems that make people vulnerable to disaster. It is also costly, slow, and often mired in conflict because it requires that some people take difficult, unpopular steps such as moving away from locations where they have lived for generations (Tierney, Lindell, & Perry, 2001).

Due to the difficulty of carrying out mitigation, many cities have done very little of it and instead resorted to a second way to deal with the challenges of disaster: disaster preparedness campaigns. In preparedness campaigns, cities focus on educating residents about how to prepare for disasters (e.g., what food and medicines to stockpile) and how to respond once a disaster strikes (e.g., how to evacuate devastated neighborhoods) (Redlener, 2006). Disaster preparedness campaigns are popular with city administrators for several reasons. First, they place the main responsibility of
preparing for a disaster on the individual rather than on the city. Individuals are supposed to take steps to ensure that they know how to get out of harms way during a disaster and that they have resources to deal with subsequent challenges. Preparedness campaigns are also popular with administrators because they are relatively cheap. City administrators carrying out disaster preparedness campaigns primarily have to be concerned with ensuring that their messages are being heard by target groups. Although disaster preparedness campaigns can be costly, they are significantly less costly than mitigation which requires addressing difficult problems that can take years to solve. In cities where the risk of disaster is compounded by the presence of extreme social inequities, disaster preparedness campaigns are often more feasible than trying to confront entrenched social problems (Phillips, 2009).

The problem with disaster preparedness campaigns is that they are often ineffective. Various studies have documented the difficulty of getting people to take steps to prepare for disaster (Drabek, 1986; Tierney et al., 2001; Perry & Lindell, 2004). There are numerous cases in contemporary times when individuals have failed to heed warnings from disaster preparedness campaigns and have suffered tremendously as a result. When this happens, it is often the individuals who are faulted for not following instructions (Sorensen & Sorensen, 2007). In the aftermath of Hurricane Katrina, for example, some argued that the tragedy of the disaster was mainly due to the stubbornness of residents who failed to follow preparedness instructions from government officials (Atkenson & Maestas, 2008). Disaster experts, however, have argued that the failure of preparedness campaigns should not be blamed solely on the recalcitrant attitude of residents of disaster zones. These experts argue that people in disaster zones face a variety of challenges (e.g., difficulty understanding warning messages, a lack of financial resources) that can hinder their ability to prepare for a disaster (Lindell, Prater, & Perry, 2006).

Two groups that face significant challenges preparing for a disaster are (a) residents of low-income neighborhoods who do not own vehicles thus rely on public transportation and (b) individuals
with mobility impairments who rely on public paratransit services. Transportation and disaster experts refer to these groups as the transportation disadvantaged (Rosenbloom, 1992). Vehicle-less individuals can face a variety of challenges when trying to prepare for a slow-onset disaster like a hurricane or a sudden disaster like a tsunami. When faced with having to plan for a future hurricane, for example, some low-income vehicle-less individuals face difficulty securing the money they will need to pay the bus, train, or plane fare to leave the disaster zone. To make matters worse, airline, bus and train operators (afraid of damage and liability) often do not provide service in areas facing a disaster which makes it hard for the vehicle-less to plan for disasters. The vehicle-less often live among other vehicle-less individuals and thus cannot work with neighbors to prepare for disaster evacuation. Even when city promises free evacuation transportation if a disaster occurs, some vehicle-less individuals do not make plans to use it. Reasons for not planning include fear of staying in public shelters with strangers (e.g., some families fear sleeping in disaster shelters alongside convicted sex offenders and felons who are often not given separate housing) and fear that evacuating will cost too much (e.g., the poor are often wary of paying for pricey hotels). Fear of looting (e.g., some stay to guard their property from potential looters) and fear for the lives of pets (e.g., in some communities, shelters only accept service animals) cause some to forgo planning for disasters (Renne, Sanchez, & Litman, 2008).

For those with mobility impairments who rely on paratransit services, the challenges posed by disasters can be more significant. Many elderly with mobility impairments cannot drive the long distances necessary to flee a disaster or endure the massive traffic jams an evacuation creates. For individuals with chronic illness and mobility impairments, the decision to evacuate can prove more risky than staying put. Evacuation vehicles and shelters are often not equipped with oxygen, electrical generators, and other resources critical for individuals with chronic illness. Evacuation can also mean a harmful disruption of therapy and special medical regiments. Faced with an evacuation process that can harm their health, some with mobility impairments plan on not evacuating (White et al., 2007).
In the aftermath of Hurricane Katrina, there has been increased recognition of the need to better assist the vehicle-less and those with mobility impairments in preparing for hurricanes and other disasters. Hurricane Katrina demonstrated the problems that can arise when a community lacks an adequate plan for helping the transportation disadvantaged prepare for a disaster. Examples of this lack of preparation were numerous in New Orleans. Hundreds of New Orleans transit buses that could have been used to evacuate transportation disadvantaged individuals were left to flood because no transit based evacuation plan had been developed (Hsu, 2006). Shortly before the hurricane reached land, Amtrak offered to use a train to carry several hundred evacuees out of the city. City officials refused this offer and the train left the city empty except for Amtrak employees (US Department of Transportation, 2006). After the hurricane struck, thousands of transportation disadvantaged people were forced to wait for days in unsanitary conditions at the New Orleans Superdome. Dozens of other transportation disadvantaged individuals, unable to reach the Superdome, drowned waiting for help. One woman with quadriplegia, for example, drowned after spending two days calling 911 begging to be rescued (Tady, 2006). There are reports that several doctors contemplated euthanizing patients that, due to a lack of planning, had not been evacuated and whose conditions deteriorated in the sweltering city (Fink, 2009). Hundreds of transportation disadvantaged individuals who attempted to flee by foot were forced to turn back when police in a neighboring parish, worried that the evacuees would loot, blocked a key route out of the city (Riccardi, 2005).

After Hurricane Katrina, there has been a push at local, state, and federal levels to implement programs that address the disaster preparedness challenges faced by transportation disadvantaged individuals. This push has been spurred by investigations that have sought to identify why the Hurricane Katrina debacle happened and what measures can be taken to prevent a re-occurrence. The first of these investigations was the Department of Homeland Security’s (DHS) Nationwide Plan Review Phase 1 and 2 (US Department of Homeland Security, 2006). In this investigation, the DHS
examined what 50 state governments, 5 US territory governments, and 75 city governments were doing to prepare for natural disasters and terrorism. The DHS investigation found that the majority of states, territories, and cities were unprepared to address the needs of transportation disadvantaged individuals during disasters. DHS investigators concluded that “overall, review participants have not thoroughly and/or realistically determined how they will manage special needs populations that require evacuation” (p. 39).

A second investigation that has highlighted challenges facing transportation disadvantaged individuals is the US Department of Transportation’s (DOT) Catastrophic Hurricane Evacuation Plan Evaluation (US Department of Transportation, 2006). In this investigation, the DOT examined two things. First, how state government agencies in Alabama, Florida, Louisiana, Mississippi, and Texas were preparing for disasters. Second, how 58 parishes in these states were also preparing for disasters. The report found that in these states and parishes, the needs of “people without private vehicles or other means of transportation” were not being sufficiently addressed (p.89). The investigators urged state and local agencies to work with transportation disadvantaged individuals “to develop systems whereby those requiring specialized transportation or sheltering services during evacuations can make those needs known to emergency managers and operators of transportation and sheltering services before evacuations” (p. 112).

A third investigation on the issue was the Government Accountability Office’s (GAO) Transportation Disadvantaged Populations: Actions Needed to Clarify Responsibilities and Increase Preparedness for Evacuations study (US Government Accountability Office, 2006). GAO investigators visited Los Angeles, Sacramento, Miami, Tallahassee, New Orleans, Buffalo, Baton Rouge, and Washington DC to assess how the cities were preparing transportation disadvantaged individuals for disaster. The GAO found that most of the cities have “significantly underestimated the advance planning and coordination required to effectively address the needs” of transportation disadvantaged
individuals (p.2). The GAO further warned that many city governments “have limited awareness or understanding of the need to plan for the evacuation of transportation-disadvantaged populations” (p. 11). Instead, many have focused primarily on assisting those who can self-evacuate using vehicles.

The fourth and most comprehensive investigation on transportation disadvantaged individuals and disaster in the US was carried out by University of New Orleans researchers with assistance from the Federal Transit Administration. In the investigation, titled National Study on Carless and Special Needs Evacuation Planning, the researchers examined what the largest cities in the US are doing to prepare transportation disadvantaged individuals for disasters (Renne, Sanchez, & Litman, 2008). The study found that 11 cities (Atlanta, Memphis, San Diego, Chicago, and Detroit are notable examples) do not provide any information at all (for example, brochures, websites, radio announcements) regarding what people without vehicles should do to prepare. Several of these cities even refused or ignored queries from the researchers asking for clarification on what is being done to prepare transportation disadvantaged individuals. Another eleven cities (notable among them were Los Angeles, Las Vegas, and Dallas) stated that they are revising their preparedness plans and possibly will include programs to prepare transportation disadvantaged people. In cases where cities provided preparedness information to transportation disadvantaged people, it was often inadequate. Ten cities, for example, were found to be instructing transportation disadvantaged individuals to wait at pick-up points during a disaster but neglecting to mention the actual location of these points. The investigators summarized the state of preparedness programs for transportation disadvantaged people as woefully inadequate:

Despite a focus on homeland security following September 11th, the fact that nearly half of the 50 largest cities lack an evacuation plan indicates that there is a crisis in evacuation planning in the United States. This is true at the municipal and regional levels. This study found that most metropolitan planning organizations and transit agencies fail to
address evacuation planning. Moreover, when it comes to evacuating the carless and people with special mobility needs, only a handful of cities have any sort of plan. (p. 86)

The city of New Orleans (in response to the criticism of investigators), has implemented a program aimed at enhancing disaster preparedness among the transportation disadvantaged. The program, labeled the City Assisted Evacuation Plan (CAEP), seeks “to help citizens who want to evacuate during an emergency, but lack the capability to self-evacuate” (New Orleans Homeland Security and Emergency Preparedness Department, 2009, p. 1). The CAEP program functions as follows. In the months prior to the hurricane season, the city encourages transportation disadvantaged individuals to register with the CAEP. Those requiring special help are encouraged to call a number to explain what help they will need during disaster evacuation. By registering, those with mobility impairments can ensure that in the case of a hurricane, they will secure appropriate transportation directly from their homes. Other individuals who do not need special help but simply needed help getting out of the city are provided with a location where they can go to be evacuated. The CAEP evacuation process is designed to function as follows: When a hurricane warning is issued and the city administrators decide that evacuation is appropriate, all transportation disadvantaged individuals in New Orleans (including those who have not registered) will be told to go to one of the 17 evacuation centers or to wait in their homes for transport. From these centers or their homes, the transportation disadvantaged individuals will then be taken to 3 locations: the New Orleans Convention Center, the city Amtrak rail terminal, and Louis Armstrong Airport. From these locations, they will be transported out of the city via train, buses, or airplane (New Orleans Homeland Security and Emergency Preparedness Department, 2009).

To ensure that transportation disadvantaged residents understand the CAEP program and utilize it, the city has carried out a public relations campaign that includes distributing information at community centers, holding press conferences, partnering with local non-profit organizations to teach
people about the program, airing videos on television, and holding disaster drills. Key messages of the campaign include why registering early is helpful, which pick-up locations should residents go to, what items to bring, how pets should be prepared for transportation, and how one can volunteer for the CAEP effort (New Orleans Homeland Security and Emergency Preparedness Department, 2009).

The first test of the effectiveness of the CAEP program was in August and September 2008 during Hurricane Gustav. When it became apparent that Gustav would pass close to New Orleans, the city’s leaders decided to order a mandatory evacuation. The move to order an evacuation reflected concerns regarding Gustav’s intensity in its early stages. In the hurricane’s first days in late August, it killed 100 people as it passed over Haiti, the Dominican Republic, and Jamaica (Campbell, 2008). The move also reflected political concerns. During August 2008, the US presidential campaign was under way and political party leaders did not want the uproar that would arise if New Orleans was not evacuated and several people died (Klein, 2008). Heeding these pressures, the city activated the evacuation component of the CAEP program and moved to transport all New Orleans residents out of the city.

After the mandatory evacuation was ordered on August 31, 2008, about 17,000 used the CAEP program to leave New Orleans (in the months before the hurricane, 21,000 had registered to use the program). Among those who were evacuated, 11,000 were evacuated using buses (87 transit and para-transit buses owned by the New Orleans Regional Transit Authority; 300 coach buses rented from private companies). Another 2,002 were evacuated using Amtrak trains and 5,000 were airlifted out of the city. The result was through the CAEP and self-evacuation (e.g., people who left using their own cars), 95 percent of the New Orleans’ population evacuated before Gustav reached the city. Therefore, although Gustav caused millions in damage to the state of Louisiana, no one in New Orleans died (So, 2008). After Gustav, the city of New Orleans labeled the CAEP program a success. The CAEP organizers conceded that there were some problems during the evacuation. For example, some rented
buses never arrived in New Orleans, the procedure of processing everyone at large centers created bottlenecks, and some evacuees’ luggage was lost. In addition, there were still unresolved legal questions regarding the program (e.g., can a volunteer or the city be sued if an evacuee gets hurt) (So, 2008). Overall, however, the city stated that CAEP was a success (Evacuteer, 2009).

The success of the CAEP program during Hurricane Gustav needs to be better understood. A key issue that needs clarification is whether disaster managers in the city of New Orleans have solved the age-old challenge of how to communicate disaster preparedness information to the transportation disadvantaged. Should other cities, under pressure to implement preparedness programs for their own transportation disadvantaged populations, replicate the CAEP approach? Or was the high evacuation rate simply a product of a unique set of circumstances that cannot be replicated in other places or even in New Orleans itself in the future? Guarded skepticism regarding the CAEP program is advisable because Hurricane Gustav was a unique event in two ways. First, it was the first major hurricane after Katrina. Hence, there was a great deal of apprehension, within and outside New Orleans, regarding whether the still recovering city could withstand another major disaster. Some experts, for example questioned whether levees repaired after Hurricane Katrina could withstand a new hurricane (Jervis, 2008). A second unique aspect of Hurricane Gustav was that it occurred during the final stages of the highly contested presidential election between Senators John McCain and Barack Obama. As a result, there was significant pressure on New Orleans city administrators (whose performance during Hurricane Katrina was widely criticized) to ensure that the embarrassing scenes of Hurricane Katrina were not repeated. Politicians, federal officials, and other persons of influence, cognizant of the negative impact a mishandled disaster would have on the presidential elections, worked hard to ensure that the problematic incidents of Hurricane Katrina did not reoccur.

The unique circumstances of Hurricane Gustav mean that it is possible that efforts of the CAEP program were not solely responsible for the fact that many transportation disadvantaged residents
complied with orders to evacuate. The fact that Gustav was the first major hurricane after Katrina (an event that may still have been fresh on people's mind) could have played a role in convincing people to evacuate. The enormous coverage Gustav received in the press may have compelled some to evacuate. The significant steps the city administrators took to ensure compliance with evacuation orders (e.g., sending law enforcement officers to emphasize evacuation orders) may also have convinced some of the importance of evacuating. The numerous admonitions from various influential outsiders (e.g., notable politicians, community leaders, musicians, movie stars) encouraging New Orleans residents to evacuate may also have played a role.

Skepticism toward the CAEP program, although advisable, is just as problematic as celebrating it. Both perspectives are based on guesses. No one really knows why many transportation disadvantaged individuals chose to evacuate during Gustav. The public relations component of the CAEP program (e.g., the messages encouraging people to prepare) could have been effective or ineffective. This dissertation, therefore, sought to address the gap in knowledge regarding the public relations aspect of the CAEP program and aimed to ascertain whether the program has indeed met the enormous challenge of effectively communicating disaster preparedness information to the transportation disadvantaged.

The challenge that emerged when this dissertation project was initially drafted was how to assess the effectiveness of the CAEP program’s public relations efforts. I recognized that it would be problematic to try to go back and try to examine the events that occurred during Hurricane Gustav. Interviewing and surveying New Orleans residents that evacuated during Hurricane Gustav (for example, asking them whether the CAEP’s public relations messages influenced their decision to evacuate) would have yielded questionable results. People’s memories of the past, especially when it comes to disasters, are often unreliable. As time passes, people’s understanding of why they took a particular action (e.g., chose to evacuate) can change. Some people can forget or become confused
regarding the source from which they received disaster preparedness information. Others can hide events they consider embarrassing (e.g., the fact they failed to heed evacuation warnings until being forced out). Trying to go back in time to assess why a preparedness effort succeeded or failed is filled with methodological pitfalls. Southwick et al. (1997) and Mechanic et al., (1998) examined this issue in detail. They pointed out that memories of traumatic events like disaster can be subject to failure, confabulation (creation of false memories, perceptions, or beliefs about the self or the environment as due to confusion between imagination and memory) or incomplete recall. Disaster research that primarily relies on asking participants questions about an event and its aftermath long after the crisis has passed can be tricky. That is not to say a researcher can’t gain useful insight by asking people about past disaster. In fact, Kaniasty and Norris (1992) demonstrated that this is possible. However, unless significant rigor and care is taken to avoid various mistakes, there is a chance of problematic results. To steer clear of this pitfall, I avoided constructing a project that relied primarily on people recalling the past.

Rather than try to look back, I chose a different approach and examined the CAEP program at a particular moment in time. Specifically, this dissertation examined the CAEP program during the 2010 hurricane season and sought to assess how effective the program was in communicating disaster preparedness messages to the transportation disadvantaged. Examining the program at a particular time removed the problem of asking people to recall the past but it introduced an additional challenge. How does one exactly assess the effectiveness of a preparedness program during a time when a disaster is not occurring? The 2010 hurricane season was one in which no major hurricane affected New Orleans. The challenge, therefore, was how to make a judgment regarding whether a preparedness program is effective without actually observing how people who have been targeted by the program behave in a disaster.

How I addressed this challenge can be explained by way of analogy. The challenge of assessing
the effectiveness of the public relations component of the CAEP program was like being asked to assess how well a swimming class teaches swimming without actually being able to observe the students swimming. A person tasked with assessing how well a swimming class teaches swimming (without having the opportunity to observe the students swimming) can do two things. First, she can talk to the students in order to learn how much they know regarding what they are supposed to do in particular scenarios in the water (e.g., what actions are they supposed to take when diving, floating, swimming backwards). Second, she can examine how the class is run and see whether how it is run matches with how other successful swimming classes have been run. This approach is not without flaws (some students may possess excellent knowledge about swimming but when placed in the water, they may fail at swimming). Flawed as it is, it is the next to best method of assessing ability without actually viewing people swim.

In order to assess how effectively the CAEP program was preparing the transportation disadvantaged for disaster, a similar approach was taken. Specifically, a research project was designed that would attempt to ascertain the following things. First, it would seek to understand what the transportation disadvantaged in New Orleans (during the 2010 hurricane season) knew about the CAEP program, their views toward the program, their disaster preparedness knowledge, and what steps they were taking to prepare. Since I could not actually observe how New Orleans residents would behave in a disaster, examining their knowledge about disaster preparedness was the next best choice to assessing the effectiveness of the CAEP program. A second thing the project aimed to do was to examine the CAEP program to see how its public relations component was being run matched with how successful public relations campaigns have been run in the past. As noted earlier, a key component of the CAEP program is a public relations campaign that seeks to educate the transportation disadvantaged about preparing for and responding to a disaster. This project, therefore, examined whether the manner in which the public relations component of the CAEP program was being run...
matched with how other successful public relations campaigns have been conducted in the past.

Two challenges became apparent when the project was initially designed. The first was how I could determine what the transportation disadvantaged in New Orleans knew about the CAEP program, their views toward the program, their disaster preparedness knowledge, and the likelihood of them following its recommendations in a future disaster. The second challenge was how to ascertain whether the public relations component of the CAEP program was being run in a manner similar to other effective public relations campaigns. To address these challenges, I turned to the literature on disaster preparedness and public relations.

Theoretical Framework

Literature from two fields of study gave useful insight on how to assess the disaster preparedness of the transportation disadvantaged in New Orleans. The first field was literature from the study of disaster preparedness. The modern study of disaster preparedness in the US can be traced back to 1956 when a team of researchers examined disaster preparedness in a flood prone area near the Rio Grande (Clifford, 1956). Since that study, there have been hundreds of studies that have sought to understand aspects of disaster preparedness such as what messages are effective in prompting people to prepare, why some groups are less prone to prepare, and how people make sense of warning messages. The findings from this research fall into four main categories that can be categorized as reception, attention, comprehension, and decision making (Perry & Lindell, 2004).

Researchers have noted that in order for people to follow preparedness instructions, they have to receive and become aware of disaster warnings (Lundgren & McMakin, 2009). Ensuring that people receive a preparedness warning is very difficult. Rowan et al. (2009) explained that warnings must be detected and in today's world, it is hard to get people to detect a message. People's use of the media (a key channel for distributing preparedness messages) is fragmented. The channels that people utilize to obtain information are varied and include cellphones, portable music players, satellite radio, television,
the Internet, print media, books, and face-to-face communication. This multitude of channels poses a challenge when attempting to reach people. In addition, some people are blind or deaf which means reception can be a challenge because they utilize non-traditional channels (Perry & Lindell, 2004).

Attention refers to the fact that disaster preparedness messages are not received in a vacuum. When people receive admonitions to prepare for disaster, it is often during normal, non-disaster times. Therefore, the disaster preparedness message has to compete with other messages people have to pay attention to (e.g., emails from family, advertisements, telephone calls, bills, texts from children). Getting people to pay attention is a challenge because there are many messages that the ordinary person is asked to focus on (Perry & Lindell, 2004).

Comprehension refers to the fact that once a preparedness message is distributed, people need to understand the message. Challenges to understanding include the fact that some may not understand the warning or may not believe that an emergency may occur. Confusion can arise when people do not understand disaster processes discussed in a message (e.g., many people find it hard to understand how a storm surge is formed or how lightning is attracted to certain features). This lack of understanding can result in people not taking any steps or taking inappropriate steps to prepare for disasters (e.g., planning that when a tornado warning is announced, they can flee in their cars). Confusion also arises when people are asked to accept something that goes against what they view as common sense. Disaster managers often find it tough to convince people that brick homes are not hurricane-proof and that severely dry deserts can be flooded (Perry & Lindell, 2004).

Once people receive, pay attention to, and comprehend a message, they have to make a decision concerning the disaster. Decision making regarding a disaster is a complex process that requires several steps. The first are determining whether a threat exists (risk identification) and deciding whether to take protective action (risk assessment). The next steps are determining what can be done to protect oneself from a threat (protective action search), determining what the best method of
protection is (protective action assessment), and deciding whether the preparedness action needs to be taken at that particular time (protective action implementation) (Perry & Lindell, 2004).

A second field whose literature gave useful insight on how to assess the disaster preparedness of the transportation disadvantaged in New Orleans was public relations. Specifically, public relations studies that have examined why people targeted by a public relations campaign (e.g. a campaign encouraging them to prepare for disaster) heed or fail to heed the message of the campaign. A theory that has been developed to explain this is Grunig’s (1997) Situational Theory of Publics. Grunig developed his theory by drawing on Dewey’s (1927) concept of a public. Dewey argued that individuals must first recognize that a problem exists and then organize to do something about a problem. This is what Dewey labeled a public. For example, a public (e.g., a group of residents worried about the lack of tornado shelters in a community) emerges when people realize that the lack of tornado shelters is a problem and then organize to deal with the problem. Grunig expanded on Dewey’s ideas to develop the Situational Theory of Publics which is comprised of five key concepts.

The first concept is what Grunig labeled problem recognition: the extent to which individuals recognize a problem they are facing. Grunig argued that individuals do not think about a situation unless they view that a need exist for something to be done to improve a situation. For example, people will not clamor for improvements in disaster shelters unless they view that current disaster shelters are inadequate.

A second key concept is constraint recognition which, according to Grunig, is the extent to which an individual views his or her behavior as limited by factors beyond his or her own control. Constrains can be physical (e.g., a person can lack the money or transportation to engage in preparedness activities) or psychological (e.g., a person can believe that her or she lacks the mental capacity to make sense of preparedness instructions).

A third key concept is level of involvement. This is how people feel a problem is emotionally
and personally relevant to them. Grunig argued that involvement increases the likelihood of an individual paying attention to and acting on an issue. For example, if an individual lives close to a chemical plant that recently accidentally released toxic fumes into the air, he or she is likely to show interest in a campaign that aims to make the chemical plant safer.

The above mentioned factors (level involvement, problem recognition, constraint recognition) were labeled independent variables by Grunig. Grunig states that these independent variables can predict or determine how people communicate, behave, and the attitude they hold. Grunig argued that these independent variables can affect how much individuals engage in information seeking and information processing (the dependent variables). Information seeking refers to actively looking for information. Information processing refers to not looking for information but if it emerges, processing it. By testing theory, the following tenets were developed. First, the greater people perceive obstacles (e.g., a lack of money to address an issue), the less likely they are to seek information or to act on information. Second, the more individuals think they are involved in a situation, the more likely they are to seek information and not see obstacles.

Based on these finding, Grunig theorized that there are four types of publics: nonpublic, latent, aware, and active. A nonpublic is individuals who do not recognize that a problem exists and are not affected by the problem. A latent public is a group that is affected by a problem but is not aware of it. An example is a community that lives on top of a new earthquake fault but is unaware that the earthquake fault poses a risk. An aware public is a group that recognizes that a problem exists but has not organized to address it. An example is a community that lives on top of an earthquake fault, has just become aware of the fact but has not organized to see what can be done to address the issue. An active public is a group people who recognize a problem and take steps to respond to a problem. An example is a community that lives on top of a new earthquake fault land, is aware of it, and is taking steps to prepare for an earthquake.
Drawing from this literature, it became apparent that in order to assess the CAEP program’s effectiveness, I would have to do two things concurrently. I would need to examine the nature of disaster related reception, attention, comprehension, and decision making among the transportation disadvantaged in New Orleans. I would also need to examine the nature of publics among the transportation disadvantaged in New Orleans.

Specifically, the dissertation project would have to determine whether the transportation disadvantaged in New Orleans were aware of the CAEP public relations campaign during the 2010 hurricane season. Second, if they were aware, whether they actually paid attention to the campaign's message. Third, whether the transportation disadvantaged comprehended the message being communicated by the campaign. Fourth, whether the transportation disadvantaged were engaged in decision making regarding preparedness. In particular, whether they were engaged in risk identification, risk assessment, protective action search, protective action assessment, and protective action implementation. In terms of the situational theory, I would have to determine whether the transportation disadvantaged were a latent, aware public, or active public.

The second challenge, when designing the project, was how to ascertain whether the CAEP public relations campaign was being run in a manner similar to other effective public relations campaigns. The literature on public relations also gave useful insight on how to assess this aspect of the CAEP program. In public relations, two schools of thought have given insight on how effective public relations should be carried out: the excellence theory perspective and the contingency perspective. The excellence theory is the product of several decades of research, conducted worldwide, and aimed at identifying the characteristics of public relations programs that are effective. The excellence theory’s findings fall into three categories summarized below (Grunig, Grunig, & Dozier, 2002).

The first major finding of the excellence theorists was that excellent public relations programs
are managed strategically. This means that effective public relations practitioners do not communicate just for the sake of communicating. Rather, practitioners identify (through research) the audiences that need to be reached and how to best reach them. When public relations campaigns are carried out, they are assessed to see whether they are effective in reaching their targeted audience. Managing strategically is a move away from communicating blindly (and hoping it accomplishes something). Instead, practitioners plan before communicating and assess what they are doing (Grunig, Grunig, & Dozier, 2002).

A second major finding of the excellence theorists was that effective public relations campaigns are carried out by public relations units which possess the following eight characteristics. First, public relations staff should be integrated or work in a single unit. This prevents the situation where they are scattered around the organization and lack power to shape how things are done within the organization. Second, the public relations unit (e.g., a public relations department) should be separate from advertising or marketing units. These two other fields have different priorities and when public relations is combined with them, the goal of the public relations unit can get sidetracked. Third, the public relations unit should be able to report directly to senior managers. This direct line avoids scenarios where the views of the public relations unit are distorted when they have to go through law, human resources, marketing, or other units whose priorities can contradict the public relations unit. Fourth, the unit should practice two-way symmetrical public relations which strives to balance the organization’s interests and that of its publics, is based on research, and uses communication to manage conflict with key publics. Fifth, the public relations unit should be headed by a manager who conceptualizes and directs public relations programs. Having someone in a manager role can avoid situations when an outside manager, with a distorted view of public relations, is leading the unit. Sixth, the staff in the public relations department should have the knowledge to practice two-way symmetrical public relations (an approach that values dialogue as opposed to manipulation), to serve as managers,
and should have some academic training in public relations. Lastly, staff of public relations departments should not be homogeneous but should reflect the diversity in their environment (Grunig, Grunig, & Dozier, 2002).

A third major finding of the excellence theorists was that in order for excellent public relations to occur, the organization as a whole (in which the public relations unit is located) should value engaging dialogue with its publics, should give the head of the public relations department a voice when major decisions are made, should have a participative culture, a symmetrical system of internal communication, and an organic structure. It also helps if the organization has a complex turbulent environment with pressure from activist groups (Grunig, Grunig, & Dozier, 2002).

The contingency perspective emerged to address what some have seen as weaknesses of the excellence theory perspective. Architects of contingency approach argued that the excellence theory was limited because of its emphasis on two-way symmetrical dialogue as the ideal approach to practicing public relations. Advocates of the contingency theory stated that there are many instances that two-way symmetrical dialogue may not be feasible or appropriate when carrying out public relations. Instead, they stressed that effective public relations programs utilize a contingency approach: in some contexts they may engage in dialogue with publics while in other contexts, they engage in asymmetrical tactics (Cancel, Mitrook, & Cameron, 1999). They summarized their criticism as follows:

The practice of public relations is too complex, too fluid, and impinged by far too many variables for the academy to force it into the four boxes known as the four models of public relations.' Even worse, to promulgate one of the four boxes as the best and most effective model not only tortures the reality of practicing public relations but has problems, even as a normative theory. It fails to capture the complexity and multiplicity of the public relations environment. (p. 32)
In response to criticism from the contingency approach, excellence theorists have argued that public relations practitioners can utilize asymmetrical tactics. Depending on the situation, asymmetrical tactics may sometimes be used to gain the best position for organizations within the win-win zone. Because such practices are bounded by a symmetrical worldview that respects the integrity of long-term relationships, the two-way model is essentially symmetrical (Grunig, 2001, p. 26).

Excellence theorists argue that effective public relations is characterized by a mixed motives approach: effective practitioners can engage in asymmetrical tactics as long as the overall goal of the communication efforts is a win-win situation for the entity carrying out the public relations campaign and the publics it affects.

Drawing from this literature, it became apparent that in order to assess the effectiveness of how the public relations campaign component of the CAEP program was being run, I would have to ascertain several things. First, whether the CAEP public relations campaign, at the program level, was being managed strategically. Second, whether the unit running the CAEP campaign exhibited the eight characteristics of public relations excellence. Third, whether at the organizational level, the organization in which the CAEP campaign was carried out exhibited the excellence characteristics.

Purpose Statement

The purpose of this study was to assess the effectiveness of New Orleans City Assisted Evacuation Plan in preparing the transportation disadvantaged for disaster during the 2010 hurricane season. Assessing effectiveness was done in two ways. The first way was by determining whether the transportation disadvantaged in New Orleans were receiving the campaign’s message, paying attention to the message, comprehending the message, and making decisions on how to prepare for a future disaster. The second way was by determining whether the public relations component of the CAEP program matched excellence theory perspectives on how public relations campaigns should be
organized at the program, department, and organizational levels.

Research Questions

The following research questions guided the study:

1. Are transportation disadvantaged individuals in New Orleans receiving the message of the New Orleans City Assisted Evacuation Plan campaign?
2. Are transportation disadvantaged individuals in New Orleans paying attention to the message of the New Orleans City Assisted Evacuation Plan campaign?
3. Are transportation disadvantaged individuals in New Orleans comprehending the message of the New Orleans City Assisted Evacuation Plan campaign?
4. Are transportation disadvantaged individuals in New Orleans engaging in risk identification?
5. Are transportation disadvantaged individuals in New Orleans engaging in risk assessment?
6. Are transportation disadvantaged individuals in New Orleans engaging in protective action search?
7. Are transportation disadvantaged individuals in New Orleans engaging in protective action assessment?
8. Are transportation disadvantaged individuals in New Orleans engaging in protective action implementation?
9. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the program level?
10. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the departmental level?
11. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the organizational level?

Significance of the Study

As New Orleans embarks on its innovative disaster preparedness program, a key question
remains unanswered: Is the CAEP public relations campaign actually effective? This is an important question because the CAEP program is currently the most comprehensive preparedness program aimed primarily at transportation disadvantaged individuals. It is only after Hurricane Katrina and the 2004 tsunami that cities across the world have begun to pay serious attention to the disaster needs of transportation disadvantaged individuals. The CAEP program is also the first preparedness program, aimed at the transportation advantaged, that has been tested in an actual potential disaster.

Other cities, in the US and around the world, which are under pressure to develop disaster preparedness programs for the transportation disadvantaged, will likely be looking to New Orleans for guidance on how to construct their own programs. Prior to embracing and imitating the New Orleans approach as best practices in preparing the transportation disadvantaged, the following issues need to be understood. First, whether those targeted by the CAEP public relations campaign are receiving, paying attention to, and comprehending the campaign’s message. Second, whether those targeted by the campaign are taking steps to prepare for disaster. Third, whether the CAEP public relations campaign embodies excellence at the program, departmental, and organizational levels. Understanding the effectiveness of the CAEP public relations campaign can provide much needed guidance for the numerous other cities that need to develop disaster preparedness programs for the transportation disadvantaged.

Delimitation

The study was not retrospective. I was not trying to understand why the transportation disadvantaged did not evacuate during Hurricane Katrina and chose to evacuate during Hurricane Gustav. Almost 4 years after Katrina and 2 years after Gustav, it would have been difficult to learn why people took the actions they did. As noted earlier, over time, people’s understanding of why they took certain actions tend to change. People’s recollections of the past are not simply flashbacks but often a mixture what really happened, what they hoped had happened, what they tell others happened,
What I sought to do in this dissertation was to examine the transportation disadvantaged individuals who, at the time of the study in 2010, were in a community where a disaster preparedness public relations campaign was being carried out. Specifically, I sought to understand whether the transportation disadvantaged in New Orleans were aware of the CAEP public relations campaign, were paying attention to its messages, understood its message, and whether they were following its recommendations about preparing for a disaster. This approach was less methodologically problematic than trying to go back and figure out what happened during Hurricane Katrina and Hurricane Gustav.

Limitations

Two key limitations are present in this project. The first limitation was that in order to gain an understanding of how the CAEP program was run (in particular, whether it manifested the characteristics of excellence), decision makers close to the program were the primary source of data. The perspective of decision makers, however, can differ significantly from those who are familiar with the program from the outside. To avoid obtaining a limited view of the CAEP program, I also examined secondary documents (e.g. surveys, reports by external researchers) to gain an understanding of how the CAEP program was run. A second limitation was that since I was the primary person analyzing the participants’ responses, it is possible my views (e.g., past disaster management work) shaped or skewed my interpretations. To address this limitation, I relied on the participants and other experts on disaster to review my conclusions to determine whether what I was concluding matched with what the participants were trying to convey in their responses.

Scope of the Study

This project relied on three sources of data. The first source was data collected by interviewing 50 transportation disadvantaged individuals in order to gain their views toward the CAEP program as well as their disaster preparedness knowledge (e.g., whether they were receiving, paying attention to,
comprehending, and making decisions about disaster preparedness). The second source was data collected by querying two decision makers familiar with how the CAEP program is run. The third source was websites and research reports.

Definition of Terms

The following are key terms used in this project:

New Orleans: an urban area comprised of 17 wards. The parishes surrounding the city (Plaquemines, St. Bernard, St. Tammany, St. Charles, and St. John the Baptist) were not included in this definition.

Transportation disadvantaged: The transportation disadvantaged, as examined in this project, are comprised of two vulnerable groups. The first group was residents of low-income neighborhoods who do not own cars and thus rely on public transportation. The second group was individuals with mobility impairments who require a wheelchair, crutches, cane, or other mobility aide to get around and also rely on public paratransit services (Jenkins, 2007).

Public relations: This project utilized the Hutton (1999) definition of public relations which has five parts (purpose, situational roles, primary functions performed, and tactics utilized). According to Hutton, the purpose of public relations is to manage strategic relationships between a client organization and its public (s). A public relations practitioner, depending on the situation, can be a persuader, an advocate, an educator, a crusader, an information provider, and a reputation manager. The primary functions of a public relations practitioner include conducting research, image making, counseling, managing, providing early warnings, communicating, and negotiating. The tactics and tools used in public relations include publicity, new releases, speech, interpersonal communication, web sites, publications, shows, radio, and others (Hutton, 1999).

Disaster: a physical, climate, and technology event that reveals the physical and social vulnerabilities in a community (Perry, 2007).
Disaster preparedness: Disaster preparedness refers to steps that are taken to ensure a household, community, or large entity is able to effectively respond to a disaster. Preparedness includes activities such as holding disaster drills, training emergency managers, and educating residents on how to secure themselves during a disaster (Sutton & Tierney, 2010).

Summary

This chapter introduced the study by providing a background of the study, the theoretical framework and the purpose statement. It also explained the research questions, the significance of the study, a discussion of delimitation, the limitations, a description of the scope of the study, and definition of the key terms. The rest of this study is organized into five chapters, a reference section, and an appendix section. Chapter 2 is a review of the literature on disaster preparedness, the transportation disadvantaged, and public relations. Chapter 3 details why a qualitative, constructivist approach was adopted. It also outlines the research design, the methodology of the study, the questions that participants were asked, the procedure that was followed, and the nature of sampling. Issues of ethics and verification are also addressed. Chapter 4 presents the findings. Chapter 5 discusses the findings, presents conclusions, and outlines recommendations. The dissertation closes with a reference section and appendixes.
CHAPTER 2. LITERATURE REVIEW

Literature from three fields of study (disaster preparedness, the transportation disadvantaged in disaster, and public relations) provided the basis for this dissertation project. This review of literature chapter is divided into four major sections. The first section provides a definition of disaster and related terms. A second section focuses on the transportation disadvantaged, a third section focuses on disaster preparedness, and the fourth section focuses on public relations. The chapter concludes by explaining how the research questions examined in this project emerged from the review of literature.

Disaster

Throughout the ages, people worldwide have grappled with how to cope with earthquakes, floods, hurricanes, and other natural events that can cause significant hardship. In the past 2 centuries as a result of industrial advancements, people have also have grappled with how to cope with chemical spills, massive explosions, and other human-caused events that can cause significant hardships. These events are commonly referred to as disasters. But what exactly is a disaster? In the popular media and even in some academic writing, the term disaster is used without being defined and it is taken for granted that people know what a disaster is. In everyday life in most societies, the absence of a definition of a disaster is not a big issue. Most communities are able to quickly ascertain when a disaster has occurred and take steps to deal with it (Lopez-ibor, 2005).

In the study of disasters, however, the absence of a clear definition has proven problematic. Numerous scholars have studied hundreds of events that they call disasters and have come up with a variety of conclusions. However, without a clear definition, the usefulness of these studies is questionable (Oliver-Smith, 1999). For example, in some academic writings, a tornado that destroys a community of 100 houses and a typhoon that kills 5,000 are both called disasters. The reality, however, is that these two events are very different and the conclusions that emerge from studying them are likely to be different. Whether an event is called a disaster is often dependent on who is doing the
defining. The extent of damage and deaths, for example, does not necessarily mean that an event will be defined as a disaster. In North America and Western Europe, for example, the media often labels events that kill a few people and damage a significant amount of property as disasters. However, similar events occurring in the developing world are considered routine emergencies. It often takes a significant amount of death and damage before an event in the developing world is labeled as a disaster (Perry, 2007).

Numerous governments tasked with managing the aftermath of disasters have developed criteria for defining and categorizing disasters. Government definitions, however, differ across countries (for example, what is considered a routine winter storm in Denmark maybe considered a disaster in Portugal). Even within one country, there is often a lack of consensus on what should be considered a disaster. In the US, for example, the Federal Emergency Management Agency (FEMA), for the purpose of distributing aid, makes a declaration whether an event should be considered a disaster. In 2010, FEMA declared that a tropical storm in North Carolina did not qualify as a disaster. North Carolina leaders filed an appeal that forced FEMA to relent and declare that the storm was actually a disaster (Killough, 2010). Governmental definitions, although useful for aid distribution, offer very little insight on what should be called a disaster.

Recognizing the pitfalls on conducting research without clear definitions, scholars interested in disasters have worked to find a definition of disaster. Crafting a definition has proven difficult and several challenges have merged. One key challenge is who should define what a disaster is. Initially, sociologists (a group that has studied disaster extensively) have presented definitions of what disasters are. Kroll-Smith and Gunter (1998), however, argued that in addition to sociologists, various other people affected by disasters (for example, victims who experience the event) should play a role in defining what a disaster is.

A second challenge that has emerged is whether to draft a common, universal definition of
disaster. Quarantelli (1998) pointed out that trying to come up with one common definition of disaster is a problematic endeavor. He noted that definitions serve different purposes to people and trying to come up with one encompassing definition does not make sense. For example, the definition of disaster for an urban planner studying the distribution of aid after a hurricane is likely to be different from one for a psychiatrist examining the experiences of hurricane survivors. Instead of searching for one common definition of disaster, Quarantelli urged that scholars should focus on defining disaster in a manner that is appropriate for their field of study and the processes they study. For example, communication scholars should aim at defining disaster in a manner that focuses on the issues they focus on and which allows them to ensure that when they are referring to disaster, they are talking about things in a manner that can be understood by other communication scholars.

In the contemporary history of disaster studies (1950s to current), three primary approaches to defining disaster can be identified (Perry, 2007). The first approach, which is labeled the classical approach, has its roots in the 1950s when the first comprehensive disaster studies emerged as developed countries, worried about the implications of the Cold War, began to study what would happen in a post-nuclear strike scenario. Scholars of the classical approach defined disasters as negative situations that disrupt the social order. Integral in the classical definitions is the idea that a disaster is an extreme situation that causes a disruption from the normal way of life and the process of managing a disaster is one of returning life to a way it was prior to the disaster (Perry, 2007).

A second approach to defining disaster emerged in the 1970s and can be found in the work of hazards scholars (Perry, 2007). These are scientists who are primarily interested in the physical aspects of disasters such as how tornadoes are formed, the path that hurricanes travel, or the forces that produce a typhoon. Hazards scholars defined disasters as events during which human systems encounter a hazard agent. A hazard agent can be any natural event like a blizzard, flood, or landslide. Key to the hazards approach to disaster is the view that events such as tornadoes, hurricanes, or avalanches are not
inherently destructive or negative. However, they become negative when how human beings live intrude on natural systems. For example, a coastal region can experience hundreds of years of hurricanes without it being a problem. However, it is only when human beings decide to live close to the hazard agent that a disaster occurs. Hence, it is human beings intrusion into natural systems (e.g. living in a manner that puts them close to hazards) which produces disasters.

A third approach to defining disaster is prevalent in contemporary disaster studies conducted by sociologists, urban planners, and other social scientists. The work of Perry and Quarantelli (2005) provides a comprehensive summary of this approach to defining disaster. Perry and Quarantelli explained that a key element of these contemporary definitions of disaster is the idea of social vulnerability. Disasters, according to these definitions, reveal inequities and vulnerabilities in a society. Hurricane Katrina, for example, revealed the numerous problems low-income African Americans faced in New Orleans. In Southeast Asia, the 2004 tsunami highlighted the vulnerability of the poor who often live in substandard locations too close to the ocean. Disasters, according to this view, are social in origin. The conditions that make people vulnerable to disaster are often the product of marginalization, discrimination, unfair distribution of wealth, poor land use planning, corporate malfeasance, governmental negligence, and other social problems. The hazard agent itself (e.g., the tornado, hurricane, earthquake) is simply a force that reveals the failure of a society to take care of its population. Bates and Peacock (1993), who exemplify this perspective, stated that a disaster is a social event that arises from a process that includes a social-cultural system's inability to protect its population from vulnerability.

This dissertation project adapted the social system approach to disaster and defined a disaster as a physical, climate, and technology event that reveals the physical and social vulnerabilities in a community. This definition is a combination of the classical, hazards, and social science approaches. A disaster, as defined in this project, is the product of a catalyst event (the classical definition) that
comes into contact with a social system (the hazards definition) which then reveals the weaknesses in that particular social system (the social science definition).

Having defined disaster, it is also important to define three related terms that are frequently used when discussing disasters: hazard, vulnerability, and risk. A hazard, as utilized in this project, refers to an event that has the potential to disrupt a social system. Hazards fall into three categories: natural, social natural, and human-made (Khan & Khan, 2008). Natural hazards are the product of natural climate and other forces. These include cyclones, tsunamis, earthquake, and volcanic eruptions. Social-natural hazards have their roots in both natural origins and human actions. Examples include flooding caused by blocking streams with human waste or landslides caused by the cutting down of trees on mountains. Human-made hazards are the result of human negligence. These include chemical explosions, factory fires, and the dumping of polluted items into rivers (Khan & Khan, 2008).

Vulnerability, in this project, is the extent to which a particular social system is likely to be affected when it comes into contact with a hazard. How vulnerable a social system is to a hazard agent is dependent on factors such as location (how close a social system is to the agent) and the steps the social system has taken to prepare for the hazard agent. Vulnerability is often of a combination of physical and social-economic factors. For example, a neighborhood can be vulnerable due to its close location to a hazard agent. New Orleans’ 9th ward neighborhood, for example, was vulnerable because it was constructed near a levee system. The 9th ward, however, was also vulnerable due to socio-economic factors. Many of the residents in the ward lacked money to build resilient housing that could withstand a hurricane and also lacked the resources to pressure decision makers in the city to take steps to secure the levees near their neighborhood (Khan & Khan, 2008).

Risk, in this project, refers to the probability that a social system will be negatively affected by a hazard agent. Risk is a combination of three things. First, the hazard agent (how powerful it is and the likelihood of it occurring). Second the vulnerability of the social system (how capable the social
system is in handling the challenges posed by the hazard agent). Third, the value of items (often in monetary terms) of the elements of the social system that would be negatively affected by the hazard agent (Khan & Khan, 2008). Jakarta, hence, can be said to be at great risk of a catastrophic earthquake because it is located in a region where earthquakes are frequent (hazard agent frequency), its skyscrapers are located near substandard slums that routinely catch on fire (vulnerability) which could result in a major fire that could destroy billions of dollars in property (the city is a major economic center in Southeast Asia).

Disaster Preparedness

To understand what disaster preparedness is, it is important to examine the origins of the concept. The concept of disaster preparedness has its roots in the work of the US National Governor's Association during the 1970s. The association is a group that works to enhance cooperation among states and the federal government in addressing challenges facing the country. In 1977, the association’s research arm undertook a project to examine how well states were preparing for disasters. The research project was prompted by a concern within the association that the US lacked a comprehensive plan to address natural and human-made disasters. After 2 years of research, the association produced a landmark report which provided the first comprehensive explanation of disaster preparedness (Baird, 2010).

In the report, the association argued that in order to effectively manage the threat posed by hazards, states should be able to effectively carry out four things: disaster mitigation, disaster preparedness, disaster response, and disaster recovery (National Governors Association, 1979). Disaster mitigation refers to taking steps to decrease vulnerability. In many communities, it often means taking steps to reduce physical vulnerability by strengthening building codes, installing protective barriers, and constructing other features to minimize the physical impact of a disaster. In recent years, mitigation has also meant taking steps to reduce social-economic vulnerability by
providing low-income people with assistance to construct homes in safer places and to engage in work that does not put them close to hazards (Baird, 2010).

Disaster preparedness refers to steps that are taken to ensure a household, community, or even a state is able to effectively respond to a disaster. Preparedness includes activities such as holding disaster drills, training emergency managers, and educating residents on how to secure themselves during a disaster. Preparedness projects are often driven by the recognition that disasters are inevitable and that mitigation alone cannot protect a community. Disaster scholars have identified several types of preparedness: household preparedness (how an individual or a group of individuals like a family prepares for disaster), organizational preparedness (how companies, non-profits, government departments, and other entities prepare for disaster), intra-organizational preparedness (how organizations work together to prepare) and state/national level preparedness (how governmental administrative units prepare) (Sutton & Tierney, 2010).

Disaster response refers to those steps taken once a disaster has occurred. These include search and rescue efforts aimed at reducing the loss of lives. Disaster recovery is the actions taken after the disaster has struck. These include short term measures (e.g., constructing temporary housing) and long term measures (e.g. reconstructing buildings, relocating critical infrastructure so it is not close to hazards) (Phillips, 1993).

These four stages (mitigation, preparedness, response, and recovery) are commonly referred to as the disaster management cycle. They have provided an easy to understand framework for assessing how well prepared communities are for disasters. For example, the National Governor Association's report pointed out that some states focus primarily on investing for the response phase (e.g., purchasing fire trucks) while neglecting mitigation. Traditionally, most communities have neglected mitigation because it requires taking difficult steps like asking people to move their homes away from hazards (National Governors Association, 1979). Most communities do not plan for disaster recovery because
the aftermath of a disaster is hard for many to envision (Phillips, 1993). An important thing to understand is that these stages should not be thought of as separate, distinct phases. Mitigation and preparedness can occur concurrently or one before the other. For example, prior to reconstructing levees (a form of mitigation), a community can educate its residents on how to detect floods (preparedness). A community recovering from a disaster can construct sea walls (a form of mitigation) while also educating people how to prepare for a tsunami (preparedness). Disaster preparedness, hence, simply means activities aimed at preparing households and other entities for disaster. Although preparedness often occurs after mitigation and before response/recovery, it can occur before or after the other stages depending on the circumstances (Tierney, Lindell, & Perry, 2001).

The Transportation Disadvantaged

Disasters highlight vulnerabilities and reveal a society's inability to take care of segments of its population. Hurricane Katrina illustrated this aspect of disaster. During Katrina, two groups suffered significantly: individuals without cars and individuals with mobility impairments (e.g., those who rely on a wheelchair, crutches, or other aide to get around). Even though prior to the hurricane, car ownership was low (about 27 percent of city's residents did not own cars) and the rate of disability was significant (23 percent of the city's population was classified as disabled), little was done to prepare these groups for disaster (Waugh, 2006; National Council on Disability, 2006). The result was that after the hurricane struck, many victims that either lacked cars or had mobility impairments became stranded in the city. They were forced to wait for days at the New Orleans Superdome, a facility that was not prepared to handle thousands of evacuees. Dozens that were unable to reach the Superdome drowned. Several hundred attempted to flee by foot or wheelchair but were forced to turn back when police in a neighboring parish, worried that the evacuees would loot, blocked a key bridge out of the city (Riccardi, 2005).

In Katrina’s aftermath, U.S. cities and states are placing more emphasis on preparing the
vehicle-less, individuals with disabilities, racial/ethnic minorities, recent immigrants, the elderly, and other vulnerable individuals for disasters. Various cities and states have established disaster preparedness programs that focus on vulnerable groups. These programs, often labeled special needs preparedness programs, range from the basic (e.g., providing brochures on how to prepare for disaster) to sophisticated (e.g., registering persons with disabilities so they can receive evacuation assistance and other services in a disaster) (Sullivan, 2006). The increased focus on vulnerable groups is an important step to ensuring equity in disaster preparedness. However, it is not without problems. In particular, a problem is with the prevalent use of the term special needs. The section below explains the problem with the term and explains why an alternative term (transportation disadvantaged) was used in this study.

The term special needs, as used in many contemporary disaster preparedness programs, is vague. Those who fall under the category of special needs can include people with disabilities, people with mental illness, minority groups, the elderly, non–English speakers, and children. In addition, special needs can also include single parent households, people without cars, pregnant women, prisoners, patients, and the homeless (Parsons & Fulmer, 2007). What is occurring in disaster preparedness programs across the US is that different vulnerable populations are being lumped together under the category of special needs. The problem with this approach is that many of the people who fall under the special needs category have little in common with each other except that historically, they have been neglected in disaster management. For example, individuals with spinal cord injuries may not have the same disaster preparedness needs as individuals who are deaf or suffer from schizophrenia. Vehicle-less individuals may not have the same preparedness needs as persons requiring frequent dialysis treatments. Lumping these varied groups together, for the sake of expediency and cost savings, can result in disaster preparedness programs that are not very beneficial to the people they are supposed to help (Parsons & Fulmer, 2007).
Kailes and Enders (2006), who have been critical of the term special needs, have pointed out that in the US, a majority of the population can be considered special needs. Those who can be categorized as special needs (e.g., people with disabilities, immigrants, the young, the elderly, patients, minorities, pregnant women, the obese) comprise about 50 percent of the US population. Combining these various unique populations into one group results in ineffective disaster preparedness programs. A crucial step to developing effective disaster preparedness programs for vulnerable individuals is a move away from the vagueness of special needs. When discussing preparedness, scholars and practitioners (e.g., emergency managers, policy makers) need to utilize terms that clearly reflect the challenges a particular group faces when preparing for, responding to, and recovering from a disaster (Kailes & Enders, 2008).

This dissertation project heeded the advice of Kailes and Enders and adopted a more specific definition. Instead of using the vague term special needs, the term transportation disadvantaged was adopted. Other disaster scholars (e.g., Deka & Carnegie, 2010; Edgington, 2009) and policy makers (e.g., Government Accountability Office, 2007) have adopted this term. The transportation disadvantaged are individuals who are likely to face transportation difficulties during a disaster. The transportation disadvantaged, as examined in this project, are comprised of two vulnerable groups. The first group is low-income individuals who do not own cars and rely on public transportation. The second group is individuals with mobility impairments who require a wheelchair, crutches, cane, or other mobility aide to get around and also rely on public paratransit services.

The Transportation Disadvantaged and Disaster

Having defined transportation disadvantaged, this section will outline how the search of literature regarding the transportation disadvantaged and disaster was conducted. The literature regarding the transportation disadvantaged and disaster falls into two categories. In the first category are works that focus specifically on the transportation disadvantaged and disaster. These works are
very limited in number and have been published mostly after Hurricane Katrina. The works are the product of an increased desire to learn how the Hurricane Katrina debacle can be prevented from reoccurring. In the second category are works pre-dating Hurricane Katrina. Prior to Katrina, few studies focused solely on the transportation disadvantaged. Instead, insight regarding the transportation disadvantaged can be found within broader studies that examined the relationship between demographic characteristics (e.g., race, class, ethnicity, age, disability) and disaster.

To conduct the search, several search terms were developed. The key terms were transportation disadvantaged and special needs (because many academics and practitioners still use this term when talking about the transportation disadvantaged). In addition to these terms, the main US disasters in the past 15 years (e.g., Hurricane Katrina, Hurricane Isabel, the September 11 attacks) were also searched. Due to the fact that the terms crisis and risk are often used when talking about disaster, these were also utilized. Also integral to the search were the terms theory and theories (combined with preparedness, disaster, and other terms) to identify the relevant theories/models that have been developed regarding the transportation disadvantaged and disaster.

The first step in the search was to examine the databases of the two premier disaster research institutions in the United States: the University of Delaware Disaster Research Center (established in 1963) and the University of Colorado Natural Hazards Center (established in 1976). The databases of these institutions are unique because they contain various reports (unpublished elsewhere) that focus on various aspects of the disaster management cycle. These include various masters and doctoral level projects (in addition to dissertations), consulting projects, and other unpublished materials. They also contain out of print books and other hard to find material regarding disasters. These databases were searched extensively for the key terms.

The second step in the search was to examine the archives of the International Journal of Mass Emergencies and Disasters, the longest published journal focused solely on disaster. As noted earlier,
disasters are studied in a wide variety of fields. The challenge with this fragmentation is that journals that examine disasters from an interdisciplinary perspective have found it tough to survive. In the past 20 years, half a dozen journals dedicated to disaster have been started and folded. The journals that have survived are those that although they contain the title disaster, they focus on it from a niche perspective (e.g., from an urban planning perspective or an emergency management perspective). The International Journal of Mass Emergencies and Disasters is unique in that it has managed an interdisciplinary approach for a long period and offers valuable insight on disaster from a variety of perspectives. However, its adherence to an interdisciplinary approach is not very attractive to publishers and in recent years, it has been removed from the major indexers and is only available online. A key part of the search process, therefore, was going through scanned issues of the journal to identify relevant articles.

In addition to the above sources, the major databases and article indexers were searched. These include Educational Resources Information Center (ERIC), Sociological Abstracts, Communication Abstracts, Ebscohost, JSTOR, and ScienceDirect. The websites of professional organizations that deal with disasters were also examined. The website Search.usa.gov, which provides an efficient tool to examine federal, state, and local government websites, was also utilized to find reports on disasters. Google Scholar and the Social Science Citation Index were used to find influential books and articles. The researcher also visited the Library of Congress and the National Archives in Washington DC to review several rare books on disasters. Lastly, the University of Illinois at Urbana Champaign library (the largest collection of a public university in the US) also served as a useful source.

The transportation disadvantaged, demographic characteristics and disaster

Disaster research in the US has its roots in the 1950s. During this time, the federal government funded disaster research with the aim of better understanding how the US could prepare for, respond to, and recover from a nuclear strike (Tierney et al., 2001). The research on disaster done during this
period is similar to other research in the social sciences at the time: attention to issues facing vulnerable groups such as the transportation disadvantaged, minorities, immigrants, and others was very minimal. There are several notable exceptions. Moore’s (1958) study of tornadoes in Texas found that low-income African Americans and the elderly suffered the most losses during the tornadoes and required significant help to recover. Clifford (1956) examined a flood-affected town on the US-Mexican border and found that in the low-income Mexican-American community, there was a reluctance to accept official warnings and aid.

In the 1970s, scholars began to extensively examine the disaster experience of groups that are often marginalized in society due to their race, class, ethnicity, physical ability, and other characteristics. This shift reflected increased interest, among US academics, on understanding the experiences of marginalized groups. Scholars who defined disaster as events which highlighted a society's inability to prepare its vulnerable populations began to take more interest in understanding the experiences of these populations in disaster (Perry, 2007). Since the 1970s, a significant body of knowledge has been produced that describes the experiences of marginalized groups in disasters. This body of knowledge illustrates that the vehicle-less, those with mobility impairments, racial minorities, ethnic minorities, recent immigrants, the elderly, the homeless, and other vulnerable groups face significant face challenges during disaster preparedness, response, and recovery. A comprehensive discussion of this research can be found in the three seminal articles: Fothergill (1996) *Gender, risk, and disaster*, Fothergill and Peek (2004) *Poverty and disaster in the United States: A review of recent sociological findings*, and Fothergill, Maestas, and Darlington (1999) *Race, ethnicity and disasters in the United States: A review of the literature*. In the sections below, I summarize this body of knowledge which falls into five major categories.

Difficulty obtaining information and aid: Scholars have found that low income individuals, racial minorities, ethnic minorities, the disabled, recent immigrants and other vulnerable groups face
difficulty obtaining information and aid critical for preparing for, responding to, and recovering from
disaster (Peacock, Gladwin, & Morrow, 1997). The challenges to obtaining information can range
from long waits at government agencies, phone mazes, and incompetent or unfriendly staff (Harris and
Dewdney, 1994). For vulnerable individuals, finding information related to disaster is tough because
they often have limited choices on where to turn for help. Many are what Lipsky (1987) called the
non-voluntary clients of government agencies and non-profit organizations. The agencies and non-
profits where vulnerable individuals turn for help regarding preparedness, response, or recovery often
have limited resources, a large number of clients with multiple problems, and are under political or
financial pressure to reduce the number of people they serve (Lipsky, 1987). The frontline employees
(e.g., social workers, police officers, case workers) who provide services to vulnerable populations
have considerable power regarding the type of services these non-voluntary clients receive. These
service providers (Lipsky called them street level bureaucrats) are often not punished for providing
inadequate service. Non-voluntary clients are expected to be grateful for receiving any type of help
(useful or not) and those seeking individualized attention to their problems are met with a one size fits
all approach. Non voluntary clients have to tread a fine line between being polite and forcefully
demanding services they are entitled to (Lipsky, 1987).

When non-voluntary clients seek information regarding disaster, the results are often
unsatisfactory. Information sources are in many cases located in places that are physically or virtually
hard to access. In some cases, non-voluntary clients do not know how to ask for information in a
manner that the street level bureaucrats understand or expect it be asked. Overwhelmed street level
bureaucrats sometimes provide clients with information that is outdated, inaccurate, or hard to use for
people with limited education. Repeated experiences with maltreatment may prompt some non-
voluntary clients to distrust information from official sources or to avoid information seeking
altogether (Lipsky, 1987).
Agada (1999) is a key study that revealed the challenges that vulnerable groups encounter when they seek information. The author surveyed low income African Americans in Milwaukee. The study participants described encountering various obstacles when they sought information from government agencies. They complained that street level bureaucrats often selectively withheld information from minorities. For example, when African Americans called asking for information, street level bureaucrats denied or delayed access to information. A common technique was circuitous referrals that resulted in African Americans having to interact with multiple offices before getting to the right information.

Similar findings can be seen in Dervin et al. (1984) who reported that low-income African Americans and Hispanic Americans were more likely experience problems with transportation, housing, crime, and childcare which made it difficult for them to find useful information. Gourash (1978) and Matthews, Sellegren, and Williams (2002) reported that African Americans were less likely to seek information from formal sources such as libraries or government agencies. Hsia (1987) found a similar reluctance to use formal sources among low income Mexican Americans.

Communication barriers: Studies have found that vulnerable groups can face a variety of communication challenges when preparing for, responding to, and recovering from a disaster. (James, Hawkings, & Rowel, 2007) found that although many communities now have significant populations of non-English speakers, translated disaster preparedness materials are not provided. In some cases, when materials are provided, they are not properly translated. For individuals with disabilities, finding preparedness information can be a challenge. Communication challenges are also significant after a disaster. Bolin (1986) and Phillip (1993) revealed that a lack of English fluency hindered some Hispanic victims from accessing aid. Subervi-Velez et al. (1992) found that in post-earthquake San Francisco, some Red Cross officials actually refused to assist community based organizations that sought help in reaching out to non-English speakers. A study of recovery after Hurricane Andrew
found that dishonest contractors targeted primarily single women who spoke limited English (Enarson & Morrow, 1997).

Cultural barriers: Preparedness programs are often designed without considering the fact that how vulnerable groups live differs from the majority population. Yelvington (1997), for example, highlighted a problem with utilizing military-style tent camps to shelter disaster victims. He pointed out that in Florida, some immigrants from Central America (many who were refugees of war) expressed reluctance to use tents because these shelters resembled detention camps in their war-torn homelands. Issues with culture have also been observed at the disaster recovery stage. For example, after Hurricane Andrew, FEMA faced difficulties because its programs (designed with middle class nuclear families in mind) could not adjust to the complexity of the extended families of minority groups (Peacock, Gladwin, & Morrow, 1997). Following a tsunami in Alaska, the Bureau of Indian Affairs constructed houses that did not reflect the needs of the Native Alaskans. The houses’ large living rooms and bath tubs ended being used for storage because no one had bothered to take into consideration what the Native Alaskan victims preferred: in their way life, kitchens and steam baths were favored instead of bath tubs and living rooms (Davis, 1986).

Short term aid focus: Many preparedness, response, and recovery programs are not designed to address the long-standing problems facing vulnerable groups. Peacock, Gladwin, & Morrow (1997) noted that numerous preparedness campaigns ask low income individuals to prepare by purchasing extra food and other supplies. For low income individuals living pay check to pay check, this request in often unrealistic. Hence, many low income individual ignore the admonition to prepare for future disaster and instead focus their efforts on day to day survival. After a disaster, recovery efforts often do take to into considering that disasters worsen problems that existed prior to a disaster. In some cases, relief workers actually frown upon what they view as non-disaster problems. For example, Miller and Simile (1992) interviews with relief workers after Hurricane Hugo revealed that many aid
organizations were reluctant to address problems they felt were not related to the hurricane (when in reality, it was the hurricane that highlighted and worsened these pre-existing problems). After Hurricane Hugo, a significant amount of time was spent ensuring that aid recipients were not obtaining aid to resolve ongoing challenges with poverty. Miller and Simile quote several aid workers who were suspicious of “free riders” and who felt that “there were many people who were trying to get assistance for problems that were not related to the disaster” (p. 15). Instead of addressing long standing problems, many disaster management programs place an emphasis on excluding other social problems from the process. Unfortunately, this short sighted approach does not address the underlying factors that make marginalized groups vulnerable to disaster.

Unfair practices: Discriminatory practices have been found to play a role in the preparedness, response, and recovery stages. For example, obtaining adequate insurance is a critical aspect of disaster preparedness. Fothergill (2004) noted that US low-income residents in at risk areas were less likely to obtain insurance or have inadequate insurance. In many cases, this was often due to insurance companies’ red-lining low income communities.

Unfair practices are also prevalent during disaster recovery. Peacock, Dash, and Zhang (2007) reported that after a disaster, low income African Americans and non-Cuban Hispanics were more likely than whites to receive insufficient insurance settlements. Bolin’s (1994) studies of earthquakes in California found that in the aftermath of disasters, low income Hispanics face limited housing opportunities due to dishonest practices. Some landlords, seeking to circumvent rent-control rules, use earthquakes to evict minority tenants and raised rates. He explains there are reports of landlords exaggerating the damage to buildings or putting condemned notices on undamaged buildings in order to dupe low-income residents to move out. Others landlords collect rent under the promise they will repair dilapidated apartments but renege on the promises leaving renters with nowhere to go. Aptekar (1990) recounts a case of a building engineer who told Hispanic earthquake victims that they only had
Residency barriers: Various studies (e.g., Subervi-Velez et al., 1992; Bolin, 1993) have shown that undocumented migrants avoid participating in disaster preparedness, response, and recovery efforts because they fear being deported. Prior to Hurricane Ike, some undocumented migrants chose not to evacuate from at-risk areas because Texas government authorities were initially reluctant about easing immigration enforcement to help undocumented migrants flee the storm (Johnsson, 2008). After Hurricane Andrew, fear of immigration officials kept many undocumented migrants out of official tent cities (Yelvington, 1997). After the Loma Prieta earthquake of 1989, residents of illegal housing avoided getting aid because disaster managers were checking the residency status of those asking for help (Phillips, 1993).

Exclusion from the therapeutic community: Scholars of disasters have noted that following many disasters, there is a period when there is a strong outpouring of aid from outside and victims put aside old quarrels in order to help each other. What emerges are therapeutic communities in which cooperation, altruism, and mutual support are high (e.g., Barton, 1969; Fritz, 1961; Giel, 1990). Kaniasty and Norris (1995), however, pointed out that in most post-disaster contexts, the therapeutic community is not permanent, resources are finite, and needs seemingly infinite. The result is that traditionally vulnerable groups (e.g., minorities, the less educated) receive less help from the therapeutic community as compared to white, younger, and more educated victims (Bolin & Bolton, 1986; Kilijanek & Drabek, 1979). Kaniasty and Norris (1995) analysis of the therapeutic community after Hurricane Hugo found that overall, African Americans received less information and less material support than their white counterparts. Eckenrode and Wethington (1990) argued that the reason marginalized groups do not benefit from the therapeutic community is because within their
communities, low income minorities are often too overwhelmed after a disaster to provide support to each other. Due to years of exclusion from economic and social life, low income minorities often lack the resources to mobilize during times of disaster. Hence, they face a challenge trying to build therapeutic communities or access communities outside their community.

The result of these challenges is that many vulnerable populations often find it hard prepare for, respond to, and recover completely from disaster. In fact, in some cases, communities of vulnerable groups experience a significant decline after a disaster. Bolin and Stanford (1991) noted that in the post disaster environments they examined, minority communities were more likely than white communities to experience long term declines in standards of living. Dash et al. (1997) found that a predominantly African American community in Florida was plagued by long term housing and economic problems following Hurricane Andrew. In contrast, surrounding non-minority communities experienced rapid rebirth. This finding can also be seen in Morrow and Enarson (1996) who reported that two years after Hurricane Andrew, thousands of poor families headed by minority women were still living in substandard temporary housing. Phillips and Ephraim (1992) reported that a majority of people who end up homeless after a disaster are from lower socioeconomic backgrounds.

This body of knowledge is useful because it demonstrates the enormous challenges that vulnerable populations face when preparing for, responding to, and recovering from disaster. The challenge with this body of knowledge, however, is that it is almost impossible to develop models and theories from it. Drawing conclusions from studies based on demographic characteristics (e.g., race, ethnicity, income, region of origin) is fraught with missteps. For example, just because an individual is a member of a vulnerable group does not mean he is not likely to heed preparedness messages. Within vulnerable populations, there are variations. Trying to predict how a person will be have in a disaster based on their race, income, class status, physical ability, or age can be effective in some circumstances while in other contexts, it can be completely erroneous. This is because there are many
things at play aside the person’s background (e.g., how a person is treated, what access to resources the person has, the confidence the person has in her skills, how receptive the person is to innovation).

Demographic characteristics provide a good clue of likely challenges a person will encounter in a disaster but provide little insight regarding how a person will behave in a disaster.

Kailes and Enders (2006) have offered a useful framework that recognizes the usefulness of research based on demographic characteristics but avoids the pitfalls that can emerge when attempting to make predictions based on these characteristics. They argue that disaster managers should not focus on trying predicting how particular demographic groups will behave in a disaster (which is difficult to do). Rather, they should focus on meeting key functional needs that need to be met during disaster.

By focusing on functional needs, a community can ensure that various vulnerable groups in the community (e.g., those with pre-existing challenges, those whose challenges emerge during a disaster) are helped during a disaster. A functional-based approach reflects the diverse nature of vulnerability and recognizes that there is no one size fits all approach for vulnerable individuals.

Kailes and Enders argue that communities adopting a function-based approach should begin by ensuring that their disaster preparedness programs meet the communication needs that emerge during a disaster. Disaster preparedness programs should be designed so that those who have difficulty communicating (e.g., hearing, seeing, and understanding) can access services. Hence, provisions should be made that disaster preparedness information (e.g., evacuation instructions, directions to shelters) is delivered orally to those who can’t read, through interpreters for those who rely on sign language or speak a foreign language. When designing a disaster preparedness campaign, steps should be taken to ensure that it can be accessed by people with a variety of communication limitations.

Communities adopting a function-based approach should also ensure that their disaster preparedness programs meet the various medical needs that emerge during a disaster. Community disaster preparedness plans should include provisions on how to assist people with weakened immune
systems, on dialysis, on catheters, who are wounded, on portable-oxygen, requiring life-support systems, and other medical challenges (Kailes & Enders, 2006).

A function-based approach also means ensuring that a disaster preparedness program meets the various independence needs that emerge during a disaster. Community disaster management plans should include provisions on how to assist people who require help with tasks such as taking a bath, getting dressed, or using the restroom. Addressing independence needs can help those who needed help being independent prior to a disaster or those who require assistance remaining independent after a disaster.

Communities adopting a function based approach should also ensure that their disaster preparedness programs meet the various supervision needs that emerge after a disaster. Community disaster management plans should include provisions on how to assist people who require supervision during a disaster such as children, Alzheimer’s patients, individuals traumatized/depressed due to the disaster, and others who need help coping with the disaster’s aftermath.

Lastly, communities adopting a function-based approach should also ensure that their disaster programs meet the various transportation needs that emerge during a disaster. Community disaster management plans should include provisions for how zero-vehicle households, wheel-chair users, the elderly, the blind, and other non-drivers will be evacuated out of the disaster zone and how they will be returned during recovery. Contingencies should be developed if mass transit, cars, train, and air travel is significantly disrupted.

A function-based approach is critical because it moves efforts to help the vulnerable groups in disaster away from the margins and incorporates them into a community’s general disaster management plan. In addition, it avoids the mistakes that can arise when attempting to make predictions on how people will behave based on their demographic characteristics. It allows disaster managers to effectively address the challenges faced by vulnerable populations without facing the pitfalls of
predicting based on demographic characteristics. Having outlined the literature related to the transportation disadvantaged, the next section will examine literature on how people prepare for disaster, the second field of study that shaped this study.

The Phases of Preparedness

Having examined the literature on the transportation disadvantaged and disaster, this section will examine the literature on disaster preparedness. This literature attempts to understand and predict how people behave in disaster preparedness situations. The study of disaster preparedness has several interesting characteristics. First, various scholarly fields have examined the topic. For example, studies on disaster preparedness can be found in urban planning, communication, sociology, meteorology, disability studies, ethnic studies, medicine, and psychology publications. Second, as noted earlier, preparedness has also been examined at the household, organizational, intra-organizational, and the state/national levels. Some studies combine levels of analysis (e.g., some studies combine looking at how households prepare with how state institutions prepare). Therefore, to understand preparedness requires examining works in a variety of fields in addition to one's area of focus. In addition, it also necessitates examining works that may, at first glance, look like they do not deal with one's particular unit of study but in fact they do.

To understand the nature of disaster preparedness, I first developed a series of relevant terms. The key terms were disaster, disaster preparedness, and disaster response (response was included because academics and non-academics sometimes confuse preparedness with response). In addition to these terms, the main US disasters in the past 15 years (e.g., Hurricane Katrina, Hurricane Isabel, the September 11 attacks) were also searched. Due to the fact that the terms crisis and risk are often used when talking about disaster, these were also utilized. Also integral to the search were the terms theory and theories (combined with preparedness, disaster, and other terms) in order to identify the relevant theories that have been developed regarding disaster preparedness. Below, I outline what I found.
Most studies of disaster preparedness at the household level (which this dissertation focuses on) have been descriptive studies that outline the preparedness actions people took (or failed to take) prior to a particular disaster. Although descriptive studies of disaster are useful, a need exists for models that explain what happens during disaster preparedness (e.g., why do some people prepare while others refuse). Without models, the study of disaster preparedness is merely thousands of descriptive studies chronicling thousands of events. Models can assist scholars in better understanding disaster preparedness and help disaster managers figure out ways to better prepare people. In recent years, Michael Lindell at Texas A & M University and Ronald Perry at Arizona State University have heeded this call and sought to develop a model of disaster preparedness at the household level. To develop this model, they have drawn from literature in psychology, communication, marketing, and other fields that examine how people process information and make decisions. This literature review section on disaster preparedness focuses primarily on how the two scholars have drawn concepts from these various fields of study to examine disaster preparedness and to try to construct a model of disaster preparedness. The review outlines the key findings that have emerged from this effort and outlines a model that has been developed, based on these findings, to explain disaster preparedness at the household level. The following section on preparing for disaster is therefore a synthesis of the findings in the scholars’ two most influential books: Behavioral foundations of community emergency planning and Communicating Environmental Risk in Multiethnic Communities.

Persuasive Communication: The first field whose ideas that have been critical in developing a model of disaster preparedness is the field of persuasive communication. Lindell and Perry (2004) have pointed out that when people are asked to prepare for a disaster, they are often asked to do so in contexts where they lack physical proof showing why preparing is necessary. For example, people are sometimes asked to prepare for a hurricane or terror attack when they have never experienced one and there is no evidence in their environment of the damage these disasters cause. When the physical
environment lacks cues, persuasive communication is critical to convincing to prepare for disaster.

Three persuasive communication concepts have been influential in helping Perry and Lindell develop a model of disaster preparedness at the household level. The first concept is the Elaboration Likelihood Model (Petty and Cacioppo, 1990). The model argues that people exposed to persuasive messages (e.g., please make sure to take steps to prepare for a disaster) process information and change attitudes in two ways. The first way is the cognitive route in which people are influenced by the cognitive contents of the message (what the preparedness message actually says). A second way is the peripheral route which is when people are more influenced by superficial cues (e.g., how attractive the person is the person delivering the preparedness message). A second influential concept is the Heuristic Systematic Model (Chaiken, Liberman, & Egly, 1989). The model argues that people exposed to a persuasive message engage in both systematic processing (e.g., trying to understand what the message actually means) and heuristic processing (e.g., paying attention to when expert testimony is used or the number of arguments that are presented). A third influential concept is schema (pre-existing ideas regarding an issue that people hold). This concept argues, among other things, that when people have pre-existing views (e.g., how they should behave prior to a disaster), they will argue against a message that differs with their preexisting views.

By drawing on these theories when reviewing the literature on preparedness, Perry and Lindell (2004) have made the following propositions regarding persuasive communication and preparedness. How people cognitively process disaster preparedness messages can be viewed as a series of stages. People have to be exposed to the preparedness message, pay attention to it, comprehend it, accept it, and take action. Whether the preparedness message is effective is dependent of various factors. For example, whether a disaster preparedness campaign is effective is often dependent on how credible those calling for preparedness are perceived. Schemas (people's preexisting views) can also shape how people interpret preparedness information. For example, if people expect a preparedness message to
disagree with their preexisting views, they can spend time trying to come up with counterarguments (which can hinder them from paying attention).

Social Conformity: The second field whose ideas have been critical in developing a model of disaster preparedness is the study of social conformity. Drawing on numerous works on social conformity (e.g., Latane & Darley, 1970; Turner, 1991) Perry and Lindell (2004) have explained that when people are faced with a confusing situation, they often look to others around them for clues on how to respond. For example, when people are told to stock up on supplies, many do not rush out to the store. Instead, they look to see what other people are doing. If they see people other people buying supplies, they do so. When others are complacent, they do not prepare.

By drawing on concepts from the study of social conformity, Perry and Lindell (2004) have made the following arguments propositions regarding preparedness and conformity. When prompted to take steps to prepare for a disaster, individuals are likely to look to their peers for direction if they lack evidence from the outside world on what to do. For example, if there is no physical evidence that a hurricane will strike soon, individuals that have been asked to prepare for a hurricane are likely to look to their peers before taking the step to prepare. In many cases, these peers can be even be total strangers. An individual is likely to follow what others are doing when those others have power to punish the individual for not following their lead. For example, if an individual lives in a community where all people have decided not to prepare for a disaster (and are ridiculing and ostracizing those who decide to prepare), the individual is likely not heed recommendations to prepare. However, when an individual lives in a community where there is disagreement on whether to prepare (with some in favor and some against), the pressure on an individual to conform to one particular course of action is less. In addition, individuals who view themselves as competent, confident individuals (as opposed to just members of a group) are likely to resist the pressure to conform.
Decision Making Behavior: The third field whose ideas that have been critical in developing a model of disaster preparedness is the study of how people make decisions. The topic of what steps individuals take to make decisions has been studied extensively. There is still much disagreement on how people make decisions choices and there is no one overarching, comprehensive theory of decision making.

Perry and Lindell, hence, have examined and drawn from these multiple theories and models. These include Subjective Expected Utility Theory (Edwards, 1954) and Prospect Theory (Tversky & Kahneman, 1986).

By drawing on concepts from the study of decision making, Perry and Lindell have made the following propositions regarding how make people decisions about preparing for a disaster. When people are making decisions about disaster preparedness, they are often unable to effectively make sense of data regarding probability. In some cases, they believe that if a low probability event occurred in the past (e.g., a hurricane), it is unlikely to occur in the future. In other cases, they assume things are related when in reality, there are only chance relations between the two. The inability to understand probability is also evident when people make judgments about the frequency of disasters. People often assume just because in the past, a major disaster occurred about every 20 years, this pattern will continue in the future. The reality, however, is that it is just as likely that a major storm will occur 2 years after another.

In other cases, people over rely on memory. For example, residents in a community that was hit by a tornado recently are more likely to believe that another tornado will affect the community in the near future. However, these same residents are likely not to believe that an earthquake will affect their community if the last earthquake was 30 years prior and few remember it. An additional key finding is that people often lack information to make rational decisions about disaster preparedness but also fail to seek information that is readily available. In addition, when making decisions about disaster
preparedness, they only think a couple of months or years ahead but fail to recognize that the chance of disaster can last a lifetime.

Information Seeking: A fourth field whose ideas that have been critical in developing a model of disaster preparedness is the study of how people seek information. Perry and Lindell (2004) state that a key reason some people fail to prepare for emergencies is because they believe they lack adequate information about the hazard or the measures need to prepare for the hazard.

By drawing on key works on information seeking (e.g., Janis & Mann, 1977; Lazarus & Folkman, 1984); Perry and Lindell have made the following propositions regarding information seeking and disasters. When people encounter a situation where there is conflicting information regarding a hazard, they either reevaluate the information that they have or seek new information. People seek information about a hazard in order to better understand it or to calm negative thoughts or feelings brought on by the hazard. Just because an individual seeks information regarding a hazard does not mean she will believe it. In some cases, for example, individuals seek information regarding a hazard in order to refute it or to dismiss the source.

Protective Action: A fifth field whose ideas that have been critical in developing a model of disaster preparedness is the study of how people respond when they encounter warnings. Perry and Lindell state that when people are given a warning, their responses can differ. Some individuals can begin to take steps to prepare for the threat while others can seemingly ignore the threat.

By drawing on concepts from the study of protective action (e.g., Leventhal, 1970; Neurwirth, Dunwoody, & Griffin, 2000; Mulilis & Duval, 1995), Perry and Lindell have made the following propositions regarding protective action and disasters. Making people fearful through warning messages does not necessarily mean that people will take steps to prepare for a disaster. In reality, when people receive a warning about disaster preparedness, they either engage in protective action (take steps to prepare) or ignore/deny the danger. This is because knowing about a pending disaster can
be distressing. Depending on the circumstances, people can choose to ease their anxiety by taking action to prepare or by denying the existence of a problem. People engage in denial when they feel that a situation is hopeless and that they lack the time/resources to protect themselves against a disaster. In contrast, when people feel that the situation is hopeful and there is enough time/resources to address a disaster, they take steps to prepare. People are likely to feel less fearful and take steps to prepare for a disaster when a disaster preparedness warning is followed by detailed, easy to understand steps on how to prepare. People are also likely to take steps to prepare for disaster when the following conditions are available. First, the disaster is viewed as likely to happen soon and its impact severe. Second, the individuals have to believe that they are capable to effectively taking steps to prepare and that the steps will be effective.

Innovation: A sixth field whose ideas that have been critical in developing a model of disaster preparedness is the study of how people adopt innovation. Asking people to prepare for a disaster can be likened to asking people to adopt an innovation. Some individuals can begin to take steps to prepare for the threat (adopt an innovation) while others can seemingly ignore the threat.

By drawing on concepts from the study of innovation (e.g. Rogers, 1984), Perry and Lindell have made the following propositions regarding innovation and disasters. People’s adoptions of innovation (taking steps to prepare for disaster) are based on the beliefs they have toward the innovation. People are more likely to take preparedness measures if they view the measures as an improvement over past ideas, as compatible with their needs, and if they are able to test the measures (in order to see if they are effective). People are likely to adopt preparedness if they see other successfully people successfully adopt the preparedness measures.

The Protective Action Decision Model: A significant development that has emerged from research that draws from these different fields is a comprehensive model that seeks to explain the process of disaster preparedness. Perry and Lindell, architects of this model, have taken findings from
the various fields of studies and have crafted the Protective Action Decision Model which explains how disaster preparedness occurs at the household level. The model's two main parts, pre-decisional processes and decision stages, are explained in the sections that follow.

Perry and Lindell argue that in order for a preparedness message to be effective (e.g., a message warning people to store supplies for a possible storm), those targeted by the message have to go through two major phases: pre-decisional processes and decision stages. In the pre-decisional processes, the individuals targeted by the message have to receive the message, pay attention to it, and comprehend it. Various situational influences, however, can either help or hinder individuals from receiving a message, paying attention to it, and comprehending it. These include where people live (e.g., those with Internet access can sometimes access better information than those without), whether they are engaged in other matters (e.g. how busy a person is with life can influence whether she pays attention), and whether they understand (e.g., a person's level of literacy can influence how he understand messages). The authors identified eight situational influences which are explained below.

The first category of situational influences is preparedness cues. These refer to physical cues (sights, sounds, and smells) that can demonstrate that a hazard exists and can prompt people to take action to prepare. When people view physical cues, they are more likely to prepare (Saarinen and Sell, 1985). In contrast, the absence of physical cues can hinder preparedness. Scholars have also found that physical cues in the form of actions from others can enhance preparedness. Ziegler and Johnson (1984) observed that when people observe others taking steps to prepare, they are also likely to prepare.

A second situational influence is the social context. The relationships that people are part of and who they interact with can serve to influence preparedness actions. Drabek and Boggs (1968), for example, found that being connected to a large group of friends, neighbors, and coworkers can enhance the number of information sources a person receives. As a result, an individual can learn a variety of ways to prepare for disaster. Being part of a strong network can also give an individual multiple
choices to confirm preparedness messages with others. Those who are not part of strong, comprehensive networks can find obtaining and confirming preparedness information difficult. Therefore, the social network that a person belongs to (whether it emphasizes or discourages preparedness) can shape how a person responds to a hurricane preparedness message.

A third situational influence is the source credibility. Preparedness information is distributed by a variety of sources such as government officials, the media, and peers. How people perceive the credibility of these sources can influence preparedness actions. McGurie (1985) stated that credibility is comprised of two elements: expertise and trustworthiness. Expertise is how people perceive the source as possessing special skills and while trustworthiness is how they perceive the source as being able to communicate information without bias. Preparedness warnings from credible sources are more likely to be paid attention to and be accepted as illustrating the true nature of a threat. Depending on the threat, some sources are viewed as more credible than authors. Perry and Lindell (1992) found that in case of flood warnings, friends and relatives are viewed as more credible while in situations of radiological threats, government authorities are viewed as more credible. Therefore, whether a hurricane preparedness message is delivered by a source perceived as credible or not can shape how a person response.

A fourth situational influence is warning channels. Preparedness messages can be distributed using a variety of channels including personal conversation, television, the Internet, print media, and others. Each channel has different characteristics which can influence how effective it is in shaping preparedness actions. Lundgren and McMakin (2004) explained that some channels, for example, are more effective in reaching particular populations than others. For example, in some communities, more people have better access to radio than the Internet. Preparedness messages, hence, should reflect the availability of channels in a particular community. Other channels, for example face to face, are susceptible to distortion as the message is passed from one person to another. Other channels
enable immediate feedback (which can help the communicator ascertain whether the recipients understand) while on other channels (television), it is much harder to ascertain feedback (Perry & Lindell, 2004).

A fifth situation influence is warning content. The content of the preparedness message can also influence preparedness actions. Ideally, messages should be specific regarding what the recipients should do and the likelihood of a disaster event occurring. Drabek and Stephenson (1971) found that when messages are specific regarding a threat, recipients are likely to believe that a threat is real and they take steps to address the threats. Messages should also address counterarguments that people may have about preparing. In addition, messages should be repeated frequently enough that people pay attention but not too much that people get weary thus shut out the messages.

A sixth situational influence is previous experience. The experience that people have had with disasters can also influence their preparedness actions. Rowan et al. (2009) explained that in some cases, individuals who have recently experienced a disaster are more likely to believe warnings. In other cases, however, experience with disasters has been shown to hinder preparedness. Prior Hurricane Katrina, for example, some individuals who had experience hurricanes in the past refused to heed preparedness instructions because they believed that the likelihood of a catastrophic disaster was low. Personal experience can hence lead to conclusions that can lead an individual to prepare or not to prepare.

A seventh situational influence is personality characteristics. People’s personality characteristics can also impact their preparedness actions. Sims and Buaman (1972) found that people who believe they can control what happens to them are more likely to take actions in response to an impending disaster. In contrast, those who have less faith in human-kind’s ability to control nature are more likely to be fatalistic and hence do not take steps to address an impending hazard.

An eighth situational influence is demographic characteristic. People's age, ethnicity, socio-
economic status, and other demographic characteristics have been shown to impact preparedness reception, attention, and comprehension. The literature regarding this situational influence was examined in detail in that last section on the transportation disadvantaged.

Decisional Stages: The second part of the Protective Action Decision Model describes the stages that occur after an individual has managed to receive, pay attention to, and comprehend a preparedness message. Lindell and Perry (2004) explained that just because an individual comprehends a preparedness message does not necessarily mean she or he will follow its recommendations about how to prepare for disaster. In order for a preparedness message to be effective, the individual has to undergo additional stages which the authors labeled the decision stages and are described below (Perry & Lindell, 2004).

The first decision stage is the risk identification stage. In this stage, individuals ask themselves the question of whether there is a real threat they need to pay attention to. A common tendency among people is to continue to believe that their environment is normal even if messages say otherwise. Warning messages, hence, are commonly met with disbelief. In the risk identification stage, individuals attempt to ascertain whether a hazard actually exists.

In the second stage, risk assessment, individuals attempt to determine whether the hazard will affect them personally. People ask themselves the question of whether they need to personally take protective action. Whether people personalize a threat hazard is dependent on factors such as how they view the probability of the event happening and its severity on them (and their property) (Perry & Lindell, 2004).

A third decision stage is protective action search. This stage occurs when people judge a threat to be real and that there is a high chance that it will personally affect their lives. In this stage, people ask themselves what can be done to achieve protection. To find answers, people can turn to their memory (their past experience with disasters can give them a clue what to do), to neighbors, or disaster
preparedness campaigns that give recommendations on how to achieve protections (Perry & Lindell, 2004).

A fourth decision stage is protective action assessment. This stage occurs when people have identified a way to address the threat. Before adopting the solution, they evaluate it by comparing it to other forms of action (e.g., ignoring the threat). They ask themselves what is the best method of protection. When evaluating, individuals can assess a protective action by examining whether it will be effective in countering the threat, whether it might lead to other negative outcomes (e.g. evacuating may give people a chance to loot), and whether it is safe (e.g., evacuating can result in worsening health risks for some). In addition, people can assess protective active actions based on how much time they take to implement (people sometimes dislike undertaking time consuming tasks), the barriers (whether preparedness tasks require skills, equipment, special knowledge) and costs (whether the task are expensive) (Perry & Lindell, 2004).

The final decision stage is protective action implementation. This stage occurs when all the questions have been answered satisfactorily and a way to address the threat has been identified. Individuals ask themselves the question whether the protective action needs to be taken immediately and if the need is found to exist, they implement it.

Perry and Lindell argued that while individuals are going through the decision stages, they may occasionally encounter circumstances where they need additional information before proceeding to the next stage. When this occurs, individuals engage in information seeking in which they seek to identify what additional information they need, where they can obtain it, and how to best utilize the information. Information seeking is integral to the decision stages and occurs at all the stages when individuals feel that they lack inadequate details to proceed to the next.

The Protective Action Decision Model is valuable because it has shifted disaster studies from the descriptive work of the past and attempts to outline how people make decisions about disaster
preparedness. The last section of this review literature focuses on public relations and examines theories that have been developed on how organizations can communicate effectively using public relations campaigns.

Public Relations

Corporations, government agencies, non-profit organizations, and other entities are often striving to effectively communicate about critical issues (e.g., environmental hazards, product safety) to critical publics (e.g., customers, investors, competitors, activists, regulators). This type of communication is commonly referred to as public relations. But what exactly is public relations?

Public relations, like the term disaster, is a term that is frequently used but often not clearly defined. In the everyday practice of public relations, the absence of a clear definition of public relations is not a challenge. Most public relations practitioners are able carry out public relations work without having a specific definition of it. They know what public relations is and practice it.

In the study of public relations, as with the study of disasters, the absence of a clear definition is problematic. Often, when researchers write about public relations, the meaning of the term is implicit. In some studies, the unstated definition of public relations is that it represents a variety of problematic communication tactics such as obfuscation, propaganda, and spin. In other studies, the underlying definition is that public relations represents communication that aims to achieve a balance in the relationship between a communicating entity (e.g., a corporation, non-profit) and those targeted by the message (e.g., regulators, activist groups).

Recognizing the pitfalls of conducting research without a clear definition, scholars have worked to craft a definition of public relations. Crafting a definition, however, has proven difficult. Hutton (1999) identified five challenges that have made defining public relations difficult. The first challenge is that many definitions of public relations describe what public relations practitioners do (e.g., hold press conferences, distribute media releases, interact with the media) but do not describe what the
fundamental purpose of public relations is. A second challenge is that some definitions of public relations are normative and prescriptive (they outline how ideally public relations should be practiced) instead of describing how public relations is actually practiced in the everyday world. A third challenge is that when trying to define public relations, several scholars have tried to force theory from other fields into public relations. Hutton gave the example of Gordon (1997) who defined public relations as “the active participation in social construction of meaning” (p.64). Hutton explained that the problem with this definition is that it fails to distinguish public relations from other forms of communication like marketing and advertising.

A fourth challenge is the fact that many people, especially in the practitioner world, have abandoned the term public relations in favor of terms like reputation management or image management. The reason for this is that public relations has many negative connotations such as lying, influence peddling, exaggeration, and other communication vices. The problem with using alternative terms, however, is that although they are palatable to the ear, they rarely describe the fundamental purpose of public relations. Image and perception management, for example, are just a small part of what public relations people do. A related problem with using alternative terms is that they are often used in a confusing manner. Hutton pointed out that some organizations have opted to use the terms corporate communications and public affairs instead of public relations. The problem with this substitution is that there is no clear definition of what the substitute terms mean. Some use the term corporate communications to describe all public relations practices while others use the term to refer to communication aimed specifically at employees. Some use the term public affairs to describe all public relations practices while others use the term specifically to refer to communications with government entities. A fifth challenge is that differences between educators and practitioners regarding what public relations is have also made defining public relations difficult. A 1998 survey of educators and practitioners found that 62 percent disagree how public relations should address ethics,
professional standards, the role of management, measuring success and other important issues. These disagreements complicate efforts to define public relations.

Despite these challenges, there have been several attempts to define public relations. Reber and Harris (2003) provide an extensive review of these attempts. They stated that the first comprehensive attempts to define public relations occurred in the mid-1970s. In 1975, Rex Harlow, a pioneering figure in public relations, worked with 65 leaders in public relations to analyze 472 definitions of public relations that had been constructed in the past. With their input, he came up with the following lengthy definition:

Public relations is a distinctive management function which helps establish and maintain mutual lines of communication, understanding, acceptance and cooperation between an organization and its publics; involves the management of problems or issues; helps management to keep informed on and responsible to public opinion; defines and emphasizes the responsibility of management to serve the public interest; helps management keep abreast of and effectively utilize change, serving as an early warning system to help anticipate trends; and uses research and sound and ethical communication techniques as its principal tools (Harlow, 1976, p. 36)

Five years after this definition, the Public Relations Society of America conducted its survey of definitions and outlined two definitions of public relations. According to Seitel (2000), the first definition was that “public relations helps an organization and its publics adapt mutually to each other” (p.6). A second definition was that “public relations is an organization’s efforts to win the cooperation of groups of people” 9 (p.6). Wilcox, Ault, Agee and Cameron (2000), whose textbook is influential in the field, also surveyed various definitions and came up with their own definition which argued that public relations is planned, deliberate, performance based, in the public interest, uses two-way communication, and is a management function. The result of these works is that there is a multitude of
definitions but very limited agreement. Cropp and Pincus (2001) survey of attempts to define public relations explained the state of affairs as follows: “definitions of public relations continue to proliferate, with the common thread appearing to be that no one perspective or description is identical to another” (p. 192). Seitel’s (2000) chapter on defining public relations highlighted the lack of consensus by noting that public relations is a field that “many people seem to have a pretty good idea, but few seem to agree” (p.6).

Defining public relations, although challenging, is not impossible. Hutton (1999), whose definition of public relations was used in this study, provided a definition that addresses the challenges mentioned above. After reviewing the multiple definitions of public relations and the debates surrounding them, Hutton stated that there are six “distinct orientations or models of public relations practices: persuasion, advocacy, public information, cause-related public relations, image/reputation management, and relationship management” (p.205).

In the category of persuasion are approaches to public relations that aim to persuade publics to think or behave in a manner that benefits an individual, groups, or organization (these three are commonly referred to as the client organization). Hutton described the persuasion approach as proactive: a client organization carries out a campaign before an issue becomes prominent (an example is a hydroelectric company, recognizing that residents might be worried about dam breakage, using a radio campaign to convince residents that the company's dams are safe).

A second category, advocacy, are also approaches to public relations that aim to persuade publics to think or behave in a manner that benefits a client organization. Hutton, however, described advocacy approaches as reactive: a client organization carries out a campaign after an issue becomes salient (an example is a hydroelectric company, that recently experienced a dam leak, using a radio campaign to convince residents who live near that the dam is safe.)

Public information refers to approaches to public relations in which the client organization is
concerned with educating publics and serving as an information clearing house. An example is a government agency that runs a website informing people who live near dams on what precautionary measures they need to take to prepare for a future disaster.

Cause-related are approaches to public relations that aim to persuade publics to think or behave in a manner. However, they differ from persuasion and advocacy approaches in that there might not be client-organization that can benefit from the campaign. Instead, the beneficiary can be the publics targeted by the publics or society as a whole. Hutton gives the example of campaigns by the American Cancer Society, American Red Cross, and Mothers against Drunk Driving. Instead of benefiting the client organizations, their campaigns seek to benefit society by enhancing awareness regarding cancer, disasters, and the dangers of driving under the influence.

Image/reputation management are approaches to public relations that aim to enhance the image of the client organization among publics. They primarily utilize publicity, damage controls, and the manipulation of symbols as their tactics.

Relationship management are approaches to public relations that aim at “identifying mutual interests, values, and benefit between a client organization and its publics” (p.208). Public relations practitioners utilizing this approach act mainly on behalf of their client organization. However, when doing so, the make sure they are operating in a manner that is also in the best interest of the publics they affect and society as a whole. Integral elements of this approach include compromise, cooperation, trust, honesty, and when possible, solutions to public relations problems that are win-win: they benefit the client organization and the client organization’s publics.

Hutton argued that based on these approaches, a public relations practitioner can be described as either (a) a persuader, (b) an advocate, (c) an educator/provider of information, (d) a crusader, (e) an image maker or reputation manager or (f) a relationship builder/manager. He further argued that only one of the roles above is comprehensive enough to describe the nature of public relations. Advocate,
educator, and crusader are too narrow to describe the field. In addition, image-maker and reputation manager are too superficial and not comprehensive enough to describe the nature of public relations. Persuader is a close but is problematic because it does not distinguish the field from advertising and marketing. According to Hutton, relationship manager is the role most comprehensive enough to describe the nature of public relations. He explained that the other roles (persuader, advocate, educator/provider of information, crusader, image maker or reputation manager) can be subsumed under the role of relationship manager. A public relations practitioner is a relationship manager in that she acts on behalf of a particular client organization. Her job is to act on behalf of that client organization but to do so in a manner that ideally, creates a win-win situation for the client organization and the targeted publics. Hutton’s complete definition of public relations has five parts (purpose, situational roles, primary functions performed, and tactics utilized) which are summarized below.

The purpose of public relations: the purpose of public relations is to manage strategic relationships between a client organization and its public(s).

The roles of a public relations practitioner: depending on the situation, a public relations practitioner can be a persuader, an advocate, an educator, a crusader, an information provider, and a reputation manager.

The primary functions of a public relations practitioner include: conducting research, image making, counseling, managing, providing early warnings, communicating, and negotiating.

The tactics and tools used in public relations include: publicity, new releases, speech, interpersonal communication, web sites, publications, shows, radio, and others.

With this definition, it can now be understood why this dissertation refers to the CAEP disaster preparedness campaign as a public relations campaign. In a preparedness campaign, the purpose of the campaign organizers can be described as managing the relationship between a community and its vulnerable publics. The roles of the organizers of a preparedness campaign can range from persuader.
(imploring the vulnerable to evacuate), information manager (providing details on disaster) and reputation manager (building the public’s confidence in the disaster managers). The functions of those organizing the preparedness campaign can range from research (understanding publics), communicating (making publics aware of what to do) and negotiating (working with vulnerable publics to determine the best ways to evacuate a community).

Public Relations Effectiveness and Excellence

Having defined public relations, this next section examines the two major areas of public relations research that shaped this study. The two research areas are: research on campaign effectiveness and research on public relations excellence. I will first discuss the research on campaign excellence first and proceed with an examination of research on public relations excellence. In public relations, research on campaign effectiveness has focused on how public relations practitioners can communicate effectively in order to influence those targeted by a campaign (the publics of a campaign). Issues examined in campaign effectiveness research include how often should a campaign’s message be repeated, what tone a spokesperson should use, what persuasive techniques are effective with particular publics, and how apologies should be delivered.

Campaign effectiveness research overlaps significantly with the research on persuasive communication, social conformity, decision-making, information seeking, and innovation that was discussed earlier. When developing theories and models of campaign effectiveness, public relations scholars have drawn from the literature on persuasive communication, social conformity, decision making, information seeking, and innovation. Due to this state of affairs, I decided to also examine the body of knowledge on campaign effectiveness even though many of the topics overlap with what was discussed area. Although many of the findings mirror what was discussed earlier regarding persuasive communication, social conformity, decision-making, information seeking, and innovation, they are unique in that they give insight on how to communicate effectively when carrying out public relations
A theory integral to campaign effectiveness research is Grunig’s (1997) Situational Theory of Publics. Grunig developed his theory by drawing on Dewey’s (1927) concept of a public. Dewey argued that individuals must first recognize that a problem exists and then organize to do something about a problem. Dewey labeled this a public. For example, a public (e.g., a group of residents worried about the lack of hurricane evacuation routes in a community) emerges when people realize that the lack of hurricane evacuation routes is a problem and then organize to deal with the problem. Grunig expanded on Dewey’s ideas to develop the Situational Theory of Publics which has five major key concepts.

The first concept is what Grunig labeled problem recognition: the extent to which individuals recognize a problem they are facing. Grunig argued that individuals do not think about a situation unless they view that a need exists for something to be done to improve a situation. For example, people will not clamor for improvements in hurricane evacuation routes unless they view that current plans for hurricane evacuation are inadequate.

A second key concept is constraint recognition which, according to Grunig, is the extent to which an individual views his or her behavior as limited by factors beyond his or her own control. Constraints can be physical (e.g., a person can lack the money or transportation to engage in hurricane preparedness activities) or psychological (e.g., a person can believe that her or she lacks the mental capacity to make sense of hurricane preparedness instructions).

A third key concept is level of involvement. This is how people feel a problem is emotionally and personally relevant to them. Grunig argued that involvement increases the likelihood of an individual paying attention to and acting on an issue. For example, if an individual lives in a town that experienced a devastating hurricane, he or she is likely to show interest in a campaign that aims to the town safer by introducing hurricane evacuation routes."

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The above mentioned factors (level involvement, problem recognition, constraint recognition) were labeled independent variables by Grunig. Grunig states that these independent variables can predict or determine how people communicate, behave, and the attitudes they hold. Grunig argued that these independent variables can affect how much individuals engage in information seeking and information processing (the dependent variables). Information seeking refers to actively looking for information. Information processing refers to not looking for information but if it emerges, processing it. By testing the theory, the following tenets were developed. First, the greater people perceive obstacles (e.g., a lack of money to address an issue), the less likely they are to seek information or to act on information. Second, the more individuals think they are involved in a situation, the more likely they are to seek information and not see obstacles.

Based on these findings, Grunig theorized that there are four types of publics: nonpublic, latent, aware, and active. A nonpublic is a group who do not recognize that a problem exists and are not affected by the problem. A latent public is a group that is affected by a problem but is not aware of it. An example of a latent public is a community that lives near an old dam but is unaware that the aged dam now poses a risk during heavy rains. An aware public is a group that recognizes that a problem exists but has not organized to address it. An example of an aware public is a community that lives near an old dam that now poses a risk during the rains, has just become aware of the fact but has not organized to see what can be done to address the issue. An active public is a group people who recognize a problem and take steps to respond to a problem. An example of an active public is a community that lives near a new dam that poses a risk during major rains, is aware of it, and is taking steps to prepare for evacuation during a major storm.

Grunig’s ideas mirror the concepts found in Perry and Lindell’s (2004) Protective Action Decision Model. As explained earlier, Perry and Lindell argue that in order for a preparedness message to be effective (e.g., a message warning people to register for evacuation assistance), those targeted by
the message have to go through two major phases: pre-decisional processes and decision stages. In the pre-decisional processes, the individuals targeted by the message have to receive the message, pay attention to it, and comprehend it. Various situational influences, however, can either help or hinder individuals from receiving a message, paying attention to it, and comprehending it. These include where people live (e.g., those with radio access can sometimes access better information than those without), whether they are engaged in other matters (e.g. how busy a person is with work-related matters can influence whether she pays attention), and whether they understand (e.g., a person's level of education can influence how he understand messages).

The second part of the Protective Action Decision Model describes the stages that occur after an individual has managed to receive, pay attention to, and comprehend a preparedness message. Lindell and Perry (2004) explained that just because an individual comprehends a preparedness message does not necessarily mean she or he will follow its recommendations about how to prepare for disaster. In order for a preparedness message to be effective, the individual has to undergo additional stages which the authors risk identification stage, risk assessment, protective action search, protective action assessment, and protective action implementation.

Grunig’s situational theory possesses similar concepts. In order for a campaign message to be effective (e.g., a message warning people to register for evacuation assistance), those targeted by the message have to move from being a latent public (affected by an issue but unaware they are being affected) toward being an aware public (affected and aware but doing nothing), and ultimately becoming an active public (affected, aware, and taking steps to address the situation). Depending on the situation, those running a campaign should aim at increasing or decreasing people’s feelings regarding level of involvement, problem recognition, and constrain recognition. In some cases, those campaign planners may want a group of people to feel that they are close to an issue (e.g., convince them that a situation is personal), that the issue is a serious problem, and there are few constraints
preventing the group from addressing the problem. In other cases, those campaign planners may want a group of people to feel that they are not close to an issue (e.g., convince them that a situation is not personal), that the issue is not a serious problem, and there are many constraints preventing the group from addressing the problem in a particular way.

A second area of public relations research that shaped this study is research that has examined how to best structure organizations so they are effective in their public relations work. The findings from this area of research are the product of several decades of research, conducted worldwide, aimed at identifying the characteristics of public relations programs that are effective. This area of research was examined because it provides insight on how to best organize units carrying out public relations campaigns. Research on persuasion, social conformity, decision-making, information seeking, and innovation gives insight on how to communicate effectively in a public relations campaign. Research on how to best structure public relations institutions, however, gives insight on how to best organize the institutions that are carrying out the communication.

To conduct the search on this topic, the key journals in public relations (e.g., Journal of Public Relations Research, Public Relations Review) as well as influential monographs were examined. Masters and doctoral level theses on the topic were examined. In addition, databases such as the Educational Resources Information Center (ERIC), Sociological Abstracts, Communication Abstracts, Ebscohost, JSTOR, and Science Direct were examined. The websites of professional organizations that deal with public relations were also examined. Google Scholar and the Social Science Citation Index were used to find influential books and articles. I also visited the Library of Congress and the National Archives in Washington DC to review several rare books on public relations. Lastly, the University of Illinois at Urbana Champaign library (the largest collection of a public university in the US) also served as a useful source.

The search revealed two schools of thought that have emerged regarding how effective public
relations organizations should be organized: the excellence theory perspective and the contingency perspective. The excellent theory is the product of several decades of research initially funded by the International Association of Business Communicators and later replicated across the world. The research aimed at identifying the characteristics of public relations programs that are effective. The excellent theory's main findings fall into three categories summarized below (Grunig, Grunig, & Dozier, 2002).

The first major finding of the excellence theorists was that excellent public relations programs are managed strategically. This means that effective public relations practitioners do not communicate just for the sake of communicating. Rather, practitioners identify (through research) the audiences that need to be reached and how to best reach them. When public relations campaigns are carried out, they are assessed to see whether they are effective in reaching their targeted audience. Managing strategically is a move away from communicating blindly (and hoping it accomplishes something). Instead, practitioners plan before communicating and assess what they are doing (Grunig, Grunig, & Dozier, 2002).

A second major finding of the excellence theorists was that effective public relations campaigns are carried out by public relations units which possess the following eight characteristics. First, public relations staff should be integrated or work in a single unit. This prevents the situation where they are scattered around the organization and lack power to shape how things are done within the organization. Second, the public relations unit (e.g., a public relations department) should be separate from advertising or marketing units. These two other fields have different priorities and when public relations is combined with them, the goal of the public relations unit can get sidetracked. Third, the public relations unit should be able to directly report to senior managers in the organization. This direct line avoids scenarios where the views of the public relations unit are distorted when they have to go through law, human resources, marketing, or other units whose priorities can contradict the public
relations unit. Fourth, the unit should practice two-way symmetrical public relations which strives to balance the organization’s interests and that of its publics, is based on research, and uses communication to manage conflict with key publics. Fifth, the public relations unit should be headed by a manager who conceptualizes and directs public relations programs. Having someone in a manager role can avoid situations when an outside manager, with a distorted view of public relations, is leading the unit. Sixth, the staff in the public relations department should have the knowledge to practice two-way symmetrical public relations (an approach that values dialogue as opposed to manipulation), to serve as managers, and should have some academic training in public relations. Lastly, staff of public relations departments should not be homogeneous but should reflect the diversity in their environment (Grunig, Grunig, & Dozier, 2002).

A third major finding of the excellence theorists was that in order for excellent public relations to occur, the organization as a whole (in which the public relations unit is located) should value engaging dialogue with its publics, should give the head of the public relations department a voice when major decisions are made, should have a participative culture, a symmetrical system of internal communication, and an organic structure. It also helps if the organization has a complex turbulent environment with pressure from activist groups (Grunig, Grunig, & Dozier, 2002).

The contingency perspective emerged to address what some have seen as weaknesses of the excellence theory perspective. Architects of contingency approach argued that the excellence theory was limited because of its emphasis on two-way symmetrical dialogue as the ideal approach to practicing public relations. Advocates of the contingency theory stated that there are many instances that two-way symmetrical dialogue may not be feasible or appropriate when carrying out public relations. Instead, they stressed that effective public relations programs utilize a contingency approach: in some contexts they may engage in dialogue with publics while in other contexts, they engage in asymmetrical tactics (Cancel, Mitrook, & Cameron, 1999). They summarized their criticism.
as follows:

The practice of public relations is too complex, too fluid, and impinged by far too many variables for the academy to force it into the four boxes known as the four models of public relations.' Even worse, to promulgate one of the four boxes as the best and most effective model not only tortures the reality of practicing public relations but has problems, even as a normative theory. It fails to capture the complexity and multiplicity of the public relations environment. (p. 32)

In response to criticism from the contingency approach, excellence theorists have argued that public relations practitioners can utilize asymmetrical tactics

Depending on the situation, asymmetrical tactics may sometimes be used to gain the best position for organizations within the win-win zone. Because such practices are bounded by a symmetrical worldview the respects the integrity of long term relationships, the two-way model is essentially symmetrical (Grunig, 2001, p. 26)

Excellence theorists argue that effective public relations is characterized by a mixed motives approach: effective practitioners can engage in asymmetrical tactics as long as the overall goal of the communication efforts is a win-win situation for the entity carrying out the public relations campaign and the publics it affects.

Summary and Research Questions

This review revealed three key findings regarding disaster preparedness, the transportation disadvantaged, and public relations campaigns. The first key finding was in that in order for a disaster preparedness campaign to be effective (e.g., a message warning people to register for evacuation help), those targeted have to go through two phases: pre-decisional processes and decision stages. In the pre-decisional processes, the individuals targeted by the message have to receive the message, pay attention to it, and comprehend it. Eight situational influences can help or hinder individuals from receiving a
message, paying attention to it, and comprehending it. These include source credibility (e.g., whether the person delivering the preparedness if viewed as credible), warning channels (e.g., whether publics have access to channels a message is delivered), and warning content (e.g. how specific a warning content is). In the decision stages, individuals have to go through risk identification (determining whether the threat needs to be paid attention to), risk assessment (determining the threat will affect them personally), and proactive action search (determining what can be done to achieve protection). They also have to go through protective action assessment (evaluating methods for addressing the threat) and protective action implementation (deciding whether the method for addressing the threat needs to be implemented immediately). These ideas are echoed in the situational theory of public whose findings can be interpreted as follows: in order for a disaster preparedness campaign to be effective, individuals have to be transformed from being latent publics into aware publics and ultimately active publics.

Based on these findings the following research questions were drafted to assess whether the City Assisted Evacuation Plan was effective in enhancing preparedness among the transportation disadvantaged in New Orleans:

1. Are transportation disadvantaged individuals in New Orleans receiving the message of the New Orleans City Assisted Evacuation Plan campaign?
2. Are transportation disadvantaged individuals in New Orleans paying attention to the message of the New Orleans City Assisted Evacuation Plan campaign?
3. Are transportation disadvantaged individuals in New Orleans comprehending the message of the New Orleans City Assisted Evacuation Plan campaign?
4. Are transportation disadvantaged individuals in New Orleans engaging in risk identification?
5. Are transportation disadvantaged individuals in New Orleans engaging in risk assessment?
6. Are transportation disadvantaged individuals in New Orleans engaging in protective action search?
7. Are transportation disadvantaged individuals in New Orleans engaging in protective action assessment?

8. Are transportation disadvantaged individuals in New Orleans engaging in protective action implementation?

The second key finding was that the transportation disadvantaged often face numerous challenges that can make it difficult for them to prepare for, respond to, and recover from disasters. The challenges include difficulty obtaining information/aid, communication barriers (e.g., translated preparedness materials not available), cultural barriers (e.g., programs not designed to reflect people’s backgrounds), short term aid focus (e.g. preparedness programs that do not address long-standing problems such as poverty). They also face unfair practices (e.g., discriminatory practices sometimes emerge in preparedness efforts), residency barriers (e.g., undocumented migrants are purposely excluded from preparedness campaigns), and exclusion from the therapeutic community.

A third key finding was that effective public relations programs exhibit several characteristics at the program, departmental, and organizational level. At the program level, they are managed strategically. At the department level, they exhibit eight characteristics of excellence. First, public relations staff should be integrated or work in a single unit. This avoids the situation where they are scattered around the organization and lack power to shape how things are done within the organization. Second, the public relations department should be separate from marketing or advertising units. These two other fields have different priorities and when public relations is combined with them, the goal of the public relations unit can get distorted. Third, the public relations unit should have a direct reporting relationship to senior management. This direct line avoids scenarios where the views of the public relations unit are distorted when they have to go through marketing, or other units whose priorities can differ from the public relations unit. Fourth, the unit should practice two-way symmetrical public relations which seeks to balance the interests of the organization and its public, is based on research,
and uses communication to manage conflict with key publics. Fifth, the public relations unit should be headed by a manager who conceptualizes and directs public relations programs. Having someone in a manager role can avoid situations when an outside manager, with a distorted view of public relations, is leading the unit. Sixth, the staff in the public relations department should have the knowledge to practice two-way symmetric public relations (an approach that values dialogue as opposed to manipulation), to serve as managers, and should have some academic training in public relations. Lastly, public relations departments should not be homogeneous but should reflect the diversity in their environment.

The organization in which an excellent public relations department is located in should value engaging dialogue with its publics, should give the head of the public relations department a voice when major decisions are made, should have a participative culture, a symmetrical system of internal communication, and an organic structure. It also helps if the organization has a complex turbulent environment with pressure from activist groups (Grunig et al., 2002).

Based on these findings the following research questions were drafted to assess whether the City Assisted Evacuation Plan (CAEP) was effective in enhancing preparedness among the transportation disadvantaged in New Orleans:

9. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the program level?

10. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the departmental level?

11. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the organizational level?

The rest the dissertation is organized as follows. Chapter 3 explains why a qualitative, constructivist approach was adopted, the research design, the methodology, the questions participants
were asked, the procedure followed, and the nature of sampling. Ethics and verification are also addressed. Chapter 4 presents the findings. Chapter 5 presents conclusions and recommendations
CHAPTER 3. METHODOLOGY

This chapter explains the method that was used to answer this dissertation’s research questions. It is organized as follows. First, an explanation is given on why interviewing was the primary method utilized and a review of documents was the secondary method used. A description of the research participants, the instruments used in data collection, the procedures for data collection, and how data were analyzed is provided. It closes with a discussion of how the research was evaluated and how ethical issues were addressed.

As explained earlier, this dissertation’s purpose was to understand two issues. The first issue was whether the transportation disadvantaged in New Orleans were receiving, paying attention to, and comprehending the message of the CAEP public relations campaign. In addition, whether the transportation disadvantaged were engaging in risk identification, risk assessment, protective action search, protective action assessment, and protective action implementation. The second issue was whether the CAEP campaign exhibited characteristics of public relations excellence at the program, departmental, and organizational levels.

Various methods could have been used to understand the two issues. For example, I could have carried out quantitative in-person surveys of transportation disadvantaged residents to learn whether they were receiving and comprehending the CAEP campaign’s message. I could also have carried out quasi-experiments in which I would show the transportation disadvantaged sample preparedness messages and then quiz them about the messages. I could also have conducted focus groups in which individuals in charge of running the CAEP campaign would have been asked to give insight regarding how the CAEP campaign is run. Among this multitude of methods, I chose to use qualitative interviewing as the primary method and document review as the secondary method. Below, I explain why I chose a qualitative approach. I also explain why I chose structured, individual interviews as the primary method. I also explain why document review was chosen as the secondary method.
Rationale for Interviews

In qualitative research, there are a variety of data collection methods available. The most prominent ones are individual interviews (structured, semi-structured), group interviews (focus groups and non-focus groups), and observation (participant, unstructured, structured) (Marshall & Rossman, 2006). The methods I chose not to use are observation, group interviews, and semi-structured interviews. Group interviews were not utilized because they posed privacy challenges. I realized that some transportation disadvantaged individuals might not feel comfortable discussing, in a group setting, factors (e.g., poverty, mobility impairments) that make it difficult for them to prepare for disasters. Asking people to talk about poverty or disability in a group setting can have serious repercussions. For example, discrimination against people who disclose their disabilities is still a problem. Since group interviews would be putting participants at risk, I decided against them. Observation was not used because simply observing the transportation disadvantaged would give little insight regarding how they are being affected by the CAEP program. In addition, observing those running the CAEP program would reveal little about whether it embodies characteristics of excellence.

This left structured and semi-structured interviews as the remaining methods. Semi-structured interviews are carried out in an open manner. Unlike structured interviews (where questions are drafted beforehand), in semi-structured interviews only the relevant topics and general questions are drafted. The majority of questions are instead created during the interview. This allows the interviewer and interviewee to probe issues that were not anticipated when the questionnaire was designed (Marshall & Rossman, 2006). I did not use semi-structured interviews because I realized that in order to ascertain reception, attention, comprehension, and decision-making among the transportation disadvantaged, I would need to ask very specific questions. Identifying the excellence characteristics would also need specific questions. Due to my relative inexperience as an interviewer (this was my first major research project), I also realized that I ran the risk of meandering and losing
focus in an interview if I did not have a set of structured questions.

Hence, the data collection method I decided to use was the structured, individual interview. This method was chosen because it offered four advantages. First, as explained earlier, the interview would be easier for participants who might face challenges reading and writing. A second reason is that interviews can allow for quick follow-up and clarification. During an interview, a researcher can do on the spot fact checks to ensure what he or she is recording indeed reflects what the interviewee is trying to convey (Rubin & Rubin, 1995). A third reason is that interviews can reveal the subjective nature of how events are interpreted. An interview is a collaborative relationship between the interviewer and the interviewee. The questions the interviewer asks and other factors (e.g., mannerisms, tone) can shape the responses the interviewee provides. The data from an interview are therefore a product of a collaborative construction between the interviewee and interviewer. Transcripts and recordings of interviews (as well as notes kept by the interviewer) can help the interviewer understand how she or he influenced the data collection process. This recognition of one's subjectivity is critical when developing models and theories (Rubin & Rubin, 1995). A fourth reason is that interviews give insight into how a person understands a situation. Merely observing people, for example, gives insight into how they are behaving. Interviews, however, reveal how individuals actually view their own behavior and their justifications for why they behave in a particular way. Interviews enable a researcher to understand an individual’s subjective understanding of the world (Seidman, 1998).

Despite these strengths, individual interviews have several weaknesses that should be acknowledged. First, they require a researcher to work hard to gain the trust of interviewees. In some cases, interviewees are afraid to answer an interviewer’s questions because they fear losing their jobs or alienating friends. Failing to gain the trust of interviewees can derail a research project (Marshall & Rossman, 1999). A second weakness of interviews is that they are subject to constraints such as time
and location. Some interviewees can stop an interview if they feel it is taking too much time or creating an uncomfortable position where they are being interviewed (e.g., at their home or workplace).

A third weakness is that interviewer bias can skew the findings. My background (cultural, education) can result in interpretations that to me, look accurate but in reality do not reflect the world as the interviewees see it (Seidman, 1998).

To address these weaknesses, I did several things. First, I made my interviewees understand that their responses would be confidential and I would make sure their responses would not fall into the wrong hands. Second, I held the interviews at a neutral place where participants would not feel uncomfortable. Third, I followed McCracken’s (1988) advice and presented myself in a manner that balanced informality and formality. During the interviews, my speech, dress, and demeanor were formal and aimed at conveying the image that I was a learned scholar who could be trusted. At the same, I made sure that at appropriate times during the interviews, I engaged in small talk to ensure that participants recognized that I was an easygoing person who would not behave in a distant, clinical manner if a problem emerged. Lastly, to address the issue of misinterpretation, I made sure to ask interviewees follow up questions to make sure that my understanding reflected what they were trying to convey.

Rationale for Review of Documents

A key concept in qualitative research is triangulation. This is the idea that when conducting research, it is important to not just rely on one source of data. Researchers, according to this view, should try to draw on several sources before making conclusions (Marshall & Rossman, 1999). For example, instead of just relying on interviews to gain insight and draw conclusions about a group of people, other sources should be examined to see whether they support the conclusion. To supplement the interviews, I decided to review documents related to the CAEP program. Marshall and Rossman explained that researchers often supplement interviews by “gathering and analyzing documents.
produced in the course of everyday events” (pg. 85). Therefore, I decided that in addition to interviews, I would also examine documents such as text on websites, reports, and organizational charts, that have been produced about the CAEP program and related issues (e.g., the city of New Orleans). These documents were primarily examined to ascertain whether they supported my conclusions regarding the nature of public relations excellence within the CAEP campaign.

The Research Context

This study took place in the city of New Orleans. The period of data collection was between August 22, 2010 and April 4, 2011. This period included the Atlantic Ocean Hurricane Season that started on June 1, 2010 and ended on November 30, 2010. During this period, the city was still struggling to recover from Hurricane Katrina. The city’s difficulty at recovering from the disaster can be attributed to four factors. The first factor is that prior to Katrina, the city was characterized by significant social inequities. For example, before the hurricane, about 28 percent of the city lived on or below the poverty line. This problematic state of affairs did not disappear with the hurricane but instead, in many cases, became worse. A second factor is that the hurricane created significant problems that will take decades to solve. Although by 2010, many repairs had been made, many issues were still being addressed. A third factor is that the fall of 2010 was the height of the so called Great Recession during which the United States and many other countries suffered significant economic hardships. A fourth factor was the enormous BP oil spill in the Gulf of Mexico during 2010 which devastated fishing, tourism, and other Louisiana industries dependent on the waters (Greater New Orleans Community Data Center, 2010).

Evidence of a delayed recovery is evident when one looks the city’s statistics on population, housing, reconstruction, jobs, and crime in 2010. In 2010, the city’s population was 100,000 less than what it was before the hurricane. Despite efforts to rebuild, about 50,100 properties in the city were considered either vacant or without structure. As a result, rental rates were extremely high. A survey
revealed that during 2010, 58 percent of New Orleans renters were paying more than 35 percent of their household income for housing (experts state that an individual should not spend more than 30 percent of income on housing). In addition to high rates, those requiring subsidized housing faced significant waits. About 5,000 families were waiting for spots in public housing complexes owned by the city while an additional 28,960 were waiting for vouchers that could be used at privately owned housing. Homelessness was significantly higher than pre-Katrina levels with an estimated 6000 homeless people living in abandoned buildings or underneath bridges (Greater New Orleans Community Data Center, 2010).

In the area of rebuilding at the household level, limited progress had been made. A study by the Fair Housing Center found that most homeowners seeking to rebuild had received about $35,000 less than needed from the state’s reconstruction fund. In the area of jobs, the city had 95,000 less jobs than before Katrina. About 23 percent of the city’s population lived on or below the poverty level, 47,000 were receiving social security benefits, and 93,310 were receiving Medicaid benefits. In the area of crime, the city had the reputation of being rated the most dangerous city in the US in FBI statistics. New Orleans, at the time of this study, was a city that had survived Katrina but was facing significant hurdles to recover (Greater New Orleans Community Data Center, 2010).

Participants

Three types of people participated in this study. The first group was residents of low-income neighborhoods who lacked vehicles and primarily utilized public transportation. The second group was individuals with mobility impairments who utilized paratransit as their primary means of transportation. The third group was individuals in charge of running the CAEP campaign. Individuals without vehicles and individuals with mobility impairments were asked to participate in order to assess whether they were receiving, paying attention to, comprehending the CAEP campaign’s message as well as engaging in decision making about it. Officials in charge of running the CAEP
campaign were asked to participate in order to gain their insight regarding whether the CAEP campaign exhibited characteristics of public relations excellence.

To recruit these participants, the following recruitment strategy was developed. First, a flyer was designed to recruit the transportation disadvantaged. The flyer asked for potential interviewees, 18 years and older, who primarily relied on mass transit. The flyer asked if they were interested in sharing their insight regarding mass transit and natural disasters. The text of the flyer can be seen in appendix A. The second form of recruitment, aimed at those planning the campaign, was an email that was sent to officials in charge of the CAEP campaign. The email asked for participants to share their insights regarding their work carrying out the CAEP public relations campaign. The text of the email is available in appendix B.

Sampling

In qualitative research, sampling is purposive instead of random (Miles & Huberman, 1994). Hence, snowball sampling and criterion sampling were used in this project. Snowball sampling is recommended when one is attempting to reach hard to access populations (Trochim, 2005). When using snowball sampling in this study, the initial respondents to the email, advertisements, or word of mouth recruitment appeals were asked if they knew other people willing to participate in the research. This sampling proved to be useful because gaining access to transportation disadvantaged people was difficult. Some vehicle-less individuals viewed participating in a study as an extra hassle while some mobility impaired worried about issues of accessibility. A limitation with snowball sampling is that it can result in a sample that is problematically skewed (e.g., one can end up interviewing people who live on one neighborhood block). To address this limitation, I also relied on criterion sampling. In this form of sampling, a researcher sets criteria and picks all cases that meet those criteria. Thus, I developed criteria relevant to this study and specifically recruited participants who fit these particular criteria (Trochim, 2005). The criteria I developed were the following. After noticing that the majority
of participants were from two neighborhoods areas (Central City/Garden District Area and Uptown / Carrollton Area), I aimed to recruit participants who lived in other neighborhoods of the city. To accomplish this, I used the telephone recruitment portion to try to identify participants from other neighborhoods in New Orleans who were not well represented in my sample. Specifically, I reached out and encouraged participation from participants from the following neighborhoods: Mid-City, Lakeview, Gentilly, Algiers, and Lower Ninth Ward.

Questions for the Transportation Disadvantaged

After drafting the plan for recruiting participants, the next step was to draft two interview protocols: one for the transportation disadvantaged and another for the individuals in charge of running the CAEP campaign. The interview protocol for the transportation disadvantaged, which I will describe first, was divided into six sections. The first section of the interview protocol for the transportation disadvantaged was comprised of background questions aimed at determining whether the participant was a resident of New Orleans and whether she or he had experienced a past disaster. An example question asked in this section was: As you think about your lifetime, what major community-wide disaster has affected you? .

Sections two, three, four, and five of the protocol for the transportation disadvantaged aimed at determining whether the transportation disadvantaged in New Orleans were actually affected by the CAEP campaign. In order for a preparedness public relations campaign like the CAEP to be effective, those targeted by the campaign have to go through two major phases: pre-decisional processes and decision stages.

In the pre-decisional processes, the individuals targeted by the campaign have to receive the campaign’s message, pay attention to it, and comprehend it. Various situational influences can either help or hinder individuals from receiving a message, paying attention to it, and comprehending it. These include where people live (e.g., those with radio access can sometimes access better information
than those without), whether they are engaged in other matters (e.g., how busy a person is with life can influence whether he or she pays attention), and whether they understand (e.g., a person’s level of education can influence how she or he understand messages).

The second section of the transportation disadvantaged protocol, therefore, aimed to determine whether the participants had received the message of the CAEP campaign. An example question from this section was as follows:

Please think about information that you have happened to get about evacuating New Orleans during a hurricane if you do not have a car. This does not include information that you actively went looking for. From whom have you heard about evacuating New Orleans during a hurricane if you do not have a car?

The third section of the transportation disadvantaged protocol sought to determine whether the participants were actually paying attention to the message. An example question from this section was as follows: How much do you know about the different ways to evacuate New Orleans if you do not have a car? Would you say you know nothing, know a lot, or somewhere in between. Please explain your choice.

The fourth section of the transportation disadvantaged protocol sought to determine whether the participants were comprehending the CAEP campaign’s message. An example question from this section was as follows: How easy to understand was the information you have heard about evacuating if you do not have a car?

After an individual has managed to receive, pay attention to, and comprehend a preparedness message, an additional five decision stages are necessary before he or she follows a campaign’s recommendations to prepare. The first decision stage is the risk identification stage in which individuals ask themselves whether there is a real threat they need to pay attention to. In the second stage, risk assessment, individuals attempt to determine whether the hazard will affect them personally.
A third decision stage is protective action search which is when people judge a threat to be real and that there is a high chance that it will personally affect their lives. In this stage, people ask themselves what can be done to achieve protection. A fourth decision stage is protective action assessment where people have identified a way to address the threat. Before adopting it as a solution, they evaluate it by comparing it to other forms of action (e.g., ignoring the threat). They ask themselves what is the best method of protection. A final decision stage is protective action implementation when all questions have been answered satisfactorily and a way to address the threat has been identified. Individuals ask themselves whether the protective action needs to be taken immediately and if the need is found to exist, they implement it.

The fifth section of the transportation disadvantaged protocol sought, therefore, to determine whether the participants were heeding the instructions of the campaign and taking steps to prepare. The questions aimed to ascertain whether the participants were engaging in risk identification, risk assessment, protective action search, protective action assessment, and protective action implementation. Example questions from this section include:

After Hurricane Katrina, how frequently have you tried to get information about evacuating New Orleans without a car? Did you understand the information that you got? Did you discuss the information that you got with other people? How sure are you that you could effectively evacuate yourself if a hurricane evacuation was announced?

In the sixth section were questions that sought to determine demographic characteristic (e.g., race, ethnicity, level of income). The complete protocol for the transportation disadvantaged can be seen in appendix C.

Questions for Campaign Decision Makers

The second interview protocol used in this study was for individuals in charge of the CAEP campaign. This protocol aimed to ascertain three issues. The first issue was whether the CAEP
campaign was being managed strategically. Managing strategically means those running the campaign do not communicate for the sake of communication. Instead, they conduct research how to best communicate to their target audience and they carry out evaluations to ensure the campaign is working. The following are example questions that sought to determine how the CAEP was being managed: Prior to carrying out the CAEP campaign, was research carried out to prepare for the campaign? Has staff in your organization measured the success of the CAEP campaign?

A second issue the protocol sought to determine was whether the CAEP campaign exhibited, at the departmental level, the eight characteristics of excellence. These include integration in a single unit, a direct reporting relationship to senior management, and a heterogeneous staff that reflects the diversity of the audience. An example question from this section was: During the CAEP campaign, has your organization engaged in dialogue with groups targeted by the CAEP campaign?

A third issue the protocol sought to determine was whether the CAEP campaign exhibited, at the organizational level, the characteristics of excellence. These include giving the head of the public relations department a voice when major decisions are made, a participative culture within the organization, and a symmetrical system of internal communication in the organization. An example question from this section was: In your organization, does senior staff consult junior staff before the organization makes major changes? The complete protocol for people in charge of the CAEP campaign can be seen in appendix D.

Pretest

Prior to starting data collection data, I conducted two pretests of the interview protocols. Bernard (2000) recommended conducting pretests because they can reveal flaws in the protocol and reveal challenges that can arise during fieldwork. The 2 pretests I conducted revealed a critical issue. After asking a disaster expert at the United Nations (where I formerly interned in disaster communication) to preview the results from a test of the protocol for individuals in charge of CAEP
campaign, the expert explained that decision makers would find the questions confusing because in the questions, I referred to the CAEP campaign as a public relations campaign. The expert explained that it was unlikely that the decision makers would view the program solely as a public relations campaign. The expert pointed to a question like the following as problematic:

Some people describe the purpose of a public relations program like the CAEP as a conversation between city residents and emergency managers. Instead of just telling people what to do, emergency managers listen to the concerns people and create preparedness programs based on these concerns. Would you say this definition matches the goal of the CAEP program? If yes, why do you say so? If no, why does it not match the goal of the CAEP program?

Since many people have a limited understanding of what public relations is, the expert warned that references to public relations would confuse interviewees experienced in disaster management but unfamiliar with the concept of public relations. The expert recommended removing the reference to public relations and rephrasing the question as:

Some people describe the purpose of a program like CAEP as a conversation between city residents and emergency managers. Instead of just telling people what to do, emergency managers listen to the concerns people and create preparedness programs based on these concerns. Would you say this definition matches the goal of the CAEP program? If yes, why do you say so? If no, why does it not match the goal of the CAEP program?

In response to this recommendation, references to public relations were removed in the questionnaire for the campaign decision makers. Instead, the word program remained. A second challenge that emerged was the length of the protocol. The expert explained that the protocol was too lengthy and would be met with resistance from disaster managers with limited time on their hands. Following this advice, several questions were removed. The questions excised were those that asked
the disaster managers to comment about other programs aside the CAEP. Sticking the questionnaire primarily to the CAEP reduced the questionnaire to a shorter size. However, it also meant that conclusions regarding excellence at the program, departmental, and organizational level would be limited to the CAEP campaign. While truncating the protocol, care was taken not to introduce new questions or concepts. The input from the disaster expert was also used to rearrange the order of the question for the CAEP decision makers protocol and the protocol for the disaster disadvantaged.

Data Collection

The data collection (interviews and review of documents) started on August 22, 2010 and lasted until December 17, 2010. Conclusion verification was conducted between December 17, 2010 and April 4, 2011. The data collection process had two major parts. The first part focused on the transportation disadvantaged. I decided to focus on the transportation disadvantaged first because I wanted to interview as large a group as possible and I also recognized that obtaining participants from this group would be difficult. I began by emailing organizations that provide services to the mobility impaired and the vehicle-less in New Orleans. The recruitment email asked for potential interviewees, 18 years or older, who were interested in sharing their experiences regarding mass transit and natural disasters. The email described the study and asked those who were interested to call my cellphone. When participants called the number, I provided them with two options: (a) they could come to a specific site to participate in the study, and (b) I could travel to a place where the participant preferred that the interview take place. I asked the participants to bring any form of official identification so that I could verify that they were over 18. Participation was open to all ethnic, racial, and gender groups. There was no specific inclusion or exclusion criteria except determining that participants were 18 years or older. I emailed 25 organizations that provide services to low-income individuals and individuals with mobility impairments. Six organizations agreed to forward the email request to their members. Due to privacy reasons, four organizations did not tell me how many people were actually emailed the
email. Hence, it is unclear how many actually received the email. However, from the 6 mass emails sent, 38 individuals expressed interested in the study while only 29 actually showed up to participate. By asking these 29 participants (snowball sampling), I was able to identify 10 additional people who expressed an interest in the study and participated.

When I arrived in New Orleans, I secured a space in the middle of the city near the mayor’s office, the commercial business district, and the main tourist area. This location was ideal because it was next two major mass transit hubs. Near the transit hubs, I distributed the flier advertising my study. This meant I could recruit participants near the hub as well as interview people who had seen the recruitment email I had sent weeks prior. Eleven people were recruited using the flyer method. A total of 50 transportation disadvantaged participated in the study.

Upon arriving at the interview site, the participant was asked to show identification that he or she was 18 years or older. Once that had been verified, the identification was returned to the participant. The identification was not recorded nor was the participant’s real name, address, date of birth, or any other personally identifiable information. After verifying that the participant was over 18, I presented the participant with a consent form and asked the participant to read it. In addition, I read the consent form aloud.

The consent form described the study, explained to the participants that they could stop participating at any anytime, and gave information on how (if they had any concerns), they could contact me or my university. After the participant had finished reading the consent form, I asked the participant if she or he had any questions. I then read a series of questions aimed at ascertaining whether the participant understood the study. Because this project sought to understand disaster preparedness among vulnerable groups, I had to make sure some were not participating under duress (e.g., a desire to gain compensation was pressuring them to participate in a study they did not like). The questions I asked checked whether they understood the study was voluntary and that they could
stop participating at any time. If the participant had no further questions and stated he or she understood the study, I asked the participant to sign the consent form. After the participant had signed the consent form, I took consent form and placed it in a portable container. I also explained to the participants that compensation (a $5 gift card to a local pharmacy/grocery store) would not be withheld depending on whether the participant completes the study. If at any time during the interviews they felt uncomfortable and wanted to stop, they would still receive a gift card.

If they stated that they understood these terms, I then proceeded to conduct the interviews. The interviews lasted between 35 minutes to 1 hour depending on how much time the participant was willing to spend answering questions. All interviews were audio recorded with the interviewees consent. After all the questions had been asked, I stopped the audio recording. I thanked the participant for participating and reminded the participant that anytime in the future, he or she could contact the investigators and ask that the audio recording be destroyed (if the participant has a change of heart about participating). I provided the participant with the compensation.

The audio recording was then placed in separate locked container that did not contain the consent forms. The confidentiality of the participants was secured as follows: After each interview session, the separate portable containers (one containing the consent form; another containing the recordings) were transported to a safety deposit box only I had access to. After completing the field work, the consent forms and recordings were transported to the University of Illinois where they are placed in a locked file cabinet.

The procedure for decision makers familiar with the CAEP campaign was altered to accommodate the demands of the participants. After the truncated protocol was completed, the decision makers were approached by email to participate. The original plan was to interview 5 decision makers familiar with the CAEP program. After emails were sent to 15 decision makers deemed familiar with the program, 2 decided to give their input. This response rate was disappointing.
However, the decision not to participate was understandable. My interview questions would require participants to comment about their jobs and employer (the city of New Orleans). As an employee, talking about an employer can be a challenge. Many organizations have a strict policy against commenting to researchers. During these days when dissertations can be searched on the web in seconds, it is understandable that interviewees were leery about getting their views known regarding the CAEP campaign and the organization in which they work. In addition, many influential people in New Orleans are experiencing what can be termed as research fatigue. Numerous articles, books, dissertations, and documentaries about New Orleans have been produced and the same small group of decision makers is often called to answer questions. Tired of being distracted from their day-to-day work, many decision makers now simply refuse to participate in Katrina-related research.

The response rate meant that I had to modify my data collection methods in response to interviewee requests or risk not having anyone to interview at all. Originally the plan was to interview the participants for about 1 hour in the same manner I had interviewed the transportation disadvantaged. However, one of the two the participants who agreed to participate explained that she would like to see the questions first before agreeing to sit down for an interview. After reviewing the consent form and the questions, this participant proceeded to write down answers and email them back to me. This introduced an unexpected complication because I had not planned on collecting data in this manner. Not knowing what to do with this data, I conferred with an expert on research ethics at the University of Illinois. The expert explained that it would be okay to utilize this information because I could analyze it along with the secondary documents (e.g., website, flyers, and news articles) that I was already examining to gain insight into the CAEP campaign. The expert, however, explained that I would need to protect the email conversations in the same manner that I would with the recorded interviews. The expert also recommended that to avoid analysis issues at a later date, I should ask the second participant to submit response in a similar manner. I heeded this advice and the two
participants submitted their information in written format.

Researcher as Instrument

In qualitative research, researchers function as a kind of instrument during data collection and analysis (Guba & Lincoln, 1989). What this means is that a researcher’s experiences shape how data is collected and analyzed. How a researcher understands what participants are saying is influenced by the researcher’s life experiences. In addition, how the participant responds is also shaped by how they perceive the researcher. Qualitative researchers have to therefore approach what the participants are saying with an open mind even if they think it is absurd (McCracken, 1988). When collecting and analyzing data, I tried to adopt this position. Specifically, I aimed to understand the world from the perspective of my participants. Instead of rejecting their responses based on my biases, I treated each response with respect and tried to be cognizant how my life experiences have shaped my understanding.

McCracken (1988) warned that no matter how hard a researcher tries, there are going to be instances when the researcher simply can’t avoid disagreeing with what the participant is saying. In these cases, he encouraged researchers to struggle to understand the participant’s perspective no matter undesirable it may appear. A key thing I had to watch out for was inserting my understanding of disaster into the data collection and analysis process. I have studied disasters for the past 5 years and have visited communities that were significantly affected by 2004 tsunami and Hurricane Katrina. My interest in disaster arose from my work as a public relations officer for the American Insurance Association. This background gave me what McCracken (1988) called an analytic advantage. To address the possibility of my background influencing data collection and analysis, I made sure to note, in writing, when my expertise made me question participant responses. Although my background helped me in understanding my participants’ responses, I tried to make sure it did not lead to interpretations that overshadowed the input from the participants.
Data Analysis

When examining the data, I used two approaches recommended by qualitative research experts. The first was constant comparative analysis. This process involved taking a piece of data (e.g., an interview segment) and comparing it with others that are similar or different in order to identify possible relationships between data (Dey, 1993). For example, by comparing the responses of two people who said they had not heard the CAEP message, I asked myself why their responses were related or different. This constant comparison helped with identifying patterns and themes helpful in answering the research questions. A second approach I used was to follow the recommendations of Miles and Huberman that a researcher should involve the participants in analysis while also engaging in reflexivity. Two participants agreed to provide additional input after the interviews. Throughout the analysis process, I reached out to the participants to get their input on the findings. I also asked myself reflexive questions in order to determine whether there were different ways of interpreting the data.

Experts on qualitative data analysis have recommended that data analysis should not be confined to the end of the project (Bodgan & Biklen, 1992). Rather, it should be a continuous process starting when the research is designed, when the data is collected, and after the field work is completed. I followed this recommendation and ensured that data analysis was an integral part at all stages of the research process. When designing the project, I designed the research questions and procedure in a manner that took into consideration the data analysis challenges that may arise. When collecting data, I made notes and talked to participants regarding the responses I was recording. After completing the data collection, I analyzed data using the recommendations by Miles and Huberman.

The first step of this process was data reduction which involves selecting, simplifying, and transforming data from notes and transcripts. I did this by examining the notes I had taken during the interview and looking for issues relevant to the research questions. I then proceeded to transcribe the interviews and examine written materials collected from participants. After completing the
transcriptions and examining the written materials, I examined them and highlighted sections relevant to my questions.

The second step was data display which entails arranging data into accessible formats (Miles & Huberman, 1994). During data display, I organized the notes and transcripts into charts and tables. I created categories to organize the participants’ responses depending on the research questions. For example, I create a table that contained responses that indicated reception, attention, and understanding. This organization was useful because it helped me identify patterns in responses.

The third step was conclusion drawing and verification. This is when a researcher makes meaning out of data and verifies the meanings (Miles and Huberman, 1994). To draw conclusions, I examined my notes, transcripts and data displays. After coming up with the conclusions, I sought to verify their veracity by reaching out to two participants to get their input on whether my findings were on correct. I also asked an expert on disaster and public relations at the United Nations (where I interned) to give her input on the findings.

Dependability, Credibility, and Confirmability

A critical aspect of research is evaluation. Quantitative researchers examine things like reliability and validity to evaluate research. Qualitative researchers, on the other hand, have developed a different set of tools for evaluation. The reason a different tool set has been created is because qualitative and quantitative research have different goals. A key difference is that quantitative researchers are often seeking to generalize (they want to extrapolate research findings from one project to a larger population) (Trochim, 2005). Hence, quantitative researchers have developed a system of checks to ensure studies are carried out in a manner that results in finding that can be generalized to larger populations. In contrast, qualitative scholars rarely aim at generalizing their findings to a larger population. This difference in goals has meant that qualitative scholars have had to develop different criteria for evaluating research. Three important criteria they have developed are dependability,
credibility, and confirmability.

Dependability is the degree to which an outside reviewer can understand the data analysis process and the factors that led a researcher to interpret data in a particular way (Lincoln & Guba, 1985). To enhance dependability, I repeatedly questioned the responses I was receiving during data collection. I also examined what I was collecting in relationship with the theories I had reviewed. Lastly, I kept a journal describing changes that occurred during the research (e.g., how the schedule was altered, how the asking of questions was altered). These details can help a scholar in the future assess the dependability of my study.

Credibility is critical in qualitative research because researchers have to ensure that they have accurately recorded the reality as presented by the participant (Trochim, 2005). To enhance credibility, I involved participants in conclusion verification. After completing data collection, I consulted with two people I had interviewed to gain their opinion regarding the conclusions I have drawn.

Confirmability refers to the extent to which others can confirm or collaborate the results (Lincoln & Guba, 1985). To enhance confirmability, I made the research process as transparent as possible by clearly describing how data was collected and providing examples of how the data was coded. I also asked an independent reviewer (a disaster and public relations expert at the United Nations) to assess the research process and my interpretations of the data. In addition, I asked two participants to review my conclusions.

Ethical Issues and the Institutional Review Board

When designing this research, I strived to create a project would not harm participants, was done with their consent, was not deceptive, and ensured the confidentiality of their responses. As required, I had the project plan reviewed by the University of Illinois human subjects review board to ensure they are no elements that could negatively impact participants. See appendix E for the approval form University of Illinois human subjects review board and appendix F for the consent form.
participants were asked to sign. While collecting data, I refrained from asking questions about sensitive medical issues, financial issues, or traumatic disaster experiences. Participants were free to stop participating at any point during the project. I drafted a consent form that reflected the low literacy levels in New Orleans. I made sure to explain the consent process during various parts of the project and added additional questions to clarify the process. I was open about my affiliation with the University of Illinois and what I planned to do with the research findings. To ensure confidentiality, I kept interview transcripts in a secure location only accessible to my research supervisor and me. In addition, I have used pseudonyms when referring to participants and have avoided using identifying characteristics.

Summary

The study sought to answer two things. First, whether the transportation disadvantaged in New Orleans were receiving, paying attention to, and comprehending the message of the CAEP public relations campaign. In addition, whether the transportation disadvantaged were engaging in risk identification, risk assessment, protective action search, protective action assessment, and protective action implementation. The second issue was whether the CAEP campaign exhibited characteristics of public relations excellence at the program, departmental, and organizational levels. To gain insight on these issues, qualitative interviews and review of documents were utilized. Chapter 4 which follows presents the findings and Chapter 5 discusses the findings while also making recommendations.
CHAPTER 4. FINDINGS

In this dissertation, I sought to understand two things. First, whether transportation disadvantaged individuals targeted by the New Orleans City Assisted Evacuation Plan (CAEP) were receiving the campaign’s message, paying attention to it, comprehending it, and engaging in decision-making (risk identification, risk assessment, protective action search, protective action assessment, and protective action implementation). Second, I wanted to find out whether the CAEP campaign exhibited the characteristics of public relations excellence at the program, departmental, and organizational levels. To gain insight on these two issues, I collected data in three ways. First, I interviewed the transportation disadvantaged in New Orleans. Second, I collected information, via email, from people in charge of running the CAEP campaign. Third, I reviewed a variety of documents (e.g., websites, research articles) about the CAEP campaign. This chapter presents findings from this data collection. The first part of the chapter focuses on the transportation disadvantaged. The second part focuses on individuals in charge of running the CAEP campaign.

The Transportation Disadvantaged and the CAEP

On August 10, 2010 I received permission, from the University of Illinois at Urbana Champaign, to begin collection of data in New Orleans. The first step was to send out recruitment flyers to organizations in New Orleans that provide services to low-income vehicle less individuals and individuals with mobility impairments who rely on public paratransit services. I emailed 25 organizations and six agreed to forward the email request to their members. Those that refused stated that for privacy reasons, they could not allow me to use their mailing lists. For several weeks, I received phone calls and emails from people interested in participating in the study. I managed to secure 29 interviewees. An additional 11 interviewees were recruited using flyers that I posted in New Orleans and an additional 10 interviewees were recruited by asking participants whether they knew others who were interested in the study.
The interview site: In New Orleans, my interview site was located next to the main library, a few blocks from the mayor’s office, and about a one minute walk from a major transit hub. This location was ideal because participants found it easy to find the location but it also meant I could place flyers at high foot-traffic areas to recruit additional participants. My interviews started at nine in the morning and I interviewed five people per day. This arrangement allowed me a one hour break between interviews which enabled me to write notes after each interview, rest, and also allowed for extra time when participants showed up early or late.

The participants: I interviewed 25 men and 25 women. In terms of education, most were educated and the largest group (30) was individuals with a high school diploma. The majority of the participants (48) self-identified as Black/African American. The absence of other ethnic/racial minorities is something that needs to be addressed in a future study. In hind sight, it would probably have helped if I had identified partners in the Asian and Hispanic communities in New Orleans to help me recruit. In addition, I should have conducted more recruitment in Algiers and other New Orleans communities that are predominantly White. However, limits in time and money meant that I focused predominantly focused on the predominantly African American neighborhoods near downtown which have large populations of people without cars and people with mobility impairments. In terms of occupation, most of the participants (31) were working full time. Their jobs were either in the tourism sector, retail, medical services, or government services. My interview site was very close to the French Quarter (home to numerous restaurants, hotels, and other attractions), a casino, two major hospitals, and city of New Orleans government offices. The majority of my participants stopped by for interviews on their way to or from these places.

In regards to income, most of my participants (25) earned between $25,000 and $35,000. Aside 2 transient individuals, the participants were low-income but not the poorest of the poor. Most had access to home email (which they used to respond to my recruitment emails) and had steady jobs.
My participants, hence, can be described as a cross section of New Orleans low-income population ranging from those with very little (e.g., transient individuals) and the working poor. Because I did not ask about household size, the income information should be treated with caution. Since some people with the higher income might have been supporting large families, it is possible that their incomes were not as high as I recorded or high when compared to others in the city. However, since I did not venture into the poorest section of New Orleans (e.g., Iberville) and instead primarily interviewed people travelling downtown for work, my participant pool was poor but not destitute. In terms of marital status, the majority of my participants were married (19). However, as explained earlier, I did not ask about size of family so this data should also be interpreted with caution.

The last demographic category I recorded was vehicle less vs. mobility impaired. I interviewed 39 vehicle-less individuals and 11 mobility impaired. I determined mobility impairment by the presence of a wheelchair, cane, scooter, or other assistive device at the interview site. For privacy reasons and the fact that I believed that some participants would feel uncomfortable, I did not ask participants to self-disclose mobility impairments. Hence, it is possible people with non-visible impairments (heart conditions, chronic illnesses) that hinder mobility were not included. However, since disability remains stigmatized in many sectors, I steered clear of asking people to self-disclose and instead relied on making a visual observation. On the pages that follow are tables that provide a comprehensive demographic picture of the participants.
Table 4.1

Number of Transportation Disadvantaged Participants

<table>
<thead>
<tr>
<th>Sex</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Male</td>
<td>25</td>
</tr>
<tr>
<td>Female</td>
<td>25</td>
</tr>
</tbody>
</table>

Table 4.2

Age of Transportation Disadvantaged Participants

<table>
<thead>
<tr>
<th>Age</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>19-24</td>
<td>2</td>
</tr>
<tr>
<td>25-29</td>
<td>5</td>
</tr>
<tr>
<td>30-34</td>
<td>5</td>
</tr>
<tr>
<td>35-39</td>
<td>6</td>
</tr>
<tr>
<td>40-44</td>
<td>8</td>
</tr>
<tr>
<td>45-49</td>
<td>11</td>
</tr>
<tr>
<td>50-54</td>
<td>9</td>
</tr>
<tr>
<td>55-Above</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 4.3
Level of Education of Transportation Disadvantaged Participants

<table>
<thead>
<tr>
<th>Highest Education Achieved</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Some High School</td>
<td>3</td>
</tr>
<tr>
<td>High School Diploma</td>
<td>30</td>
</tr>
<tr>
<td>Some College</td>
<td>10</td>
</tr>
<tr>
<td>Bachelor’s Degree</td>
<td>7</td>
</tr>
<tr>
<td>Post Graduate</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 4.4
Background of Transportation Disadvantaged Participants

<table>
<thead>
<tr>
<th>Sex</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black/African American</td>
<td>48</td>
</tr>
<tr>
<td>White</td>
<td>2</td>
</tr>
</tbody>
</table>
### Table 4.5
Occupation of Transportation Disadvantaged Participants

<table>
<thead>
<tr>
<th>Occupation</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Working Full Time</td>
<td>31</td>
</tr>
<tr>
<td>Working Part Time</td>
<td>12</td>
</tr>
<tr>
<td>Unemployed</td>
<td>2</td>
</tr>
<tr>
<td>Retired</td>
<td>1</td>
</tr>
<tr>
<td>Homemaker</td>
<td>1</td>
</tr>
<tr>
<td>Student</td>
<td>3</td>
</tr>
</tbody>
</table>

### Table 4.6
Income of Transportation Disadvantaged Participants

<table>
<thead>
<tr>
<th>Income</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than $15,000</td>
<td>3</td>
</tr>
<tr>
<td>$15,000 to less than $25,000</td>
<td>8</td>
</tr>
<tr>
<td>$25,000 to less than $35,000</td>
<td>25</td>
</tr>
<tr>
<td>$35,000 to less than $50,000</td>
<td>10</td>
</tr>
<tr>
<td>Did not disclose</td>
<td>4</td>
</tr>
</tbody>
</table>
Table 4.7

Marital Status of Transportation Disadvantaged Participants

<table>
<thead>
<tr>
<th>Marital Status</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never Married</td>
<td>6</td>
</tr>
<tr>
<td>Married</td>
<td>19</td>
</tr>
<tr>
<td>Living Together as Married</td>
<td>12</td>
</tr>
<tr>
<td>Divorced</td>
<td>7</td>
</tr>
<tr>
<td>Separated</td>
<td>0</td>
</tr>
<tr>
<td>Widowed</td>
<td>1</td>
</tr>
<tr>
<td>Did not Disclose</td>
<td>5</td>
</tr>
</tbody>
</table>

Table 4.8

Category of Transportation Disadvantaged Participants

<table>
<thead>
<tr>
<th>Category</th>
<th>Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vehicle-less</td>
<td>39</td>
</tr>
<tr>
<td>Mobility Impaired</td>
<td>11</td>
</tr>
</tbody>
</table>

*Participant responses:* I begun the interviews with small talk to break the ice and then asked questions aimed to gauge paste experience with disaster. These questions included the following:

Community-wide disasters happen, and these happen for a variety of reasons, such as acts of nature, terrorism, industrial accidents, and other causes. As you think about your lifetime, what major community-wide disaster, if any, has affected you? Can you tell me about it?

The majority of the participants indicated that they had experienced Hurricane Katrina and the
evacuation during Hurricane Gustav. They described these events as stressful. Those who indicated that they had not experienced these events were primarily new-comers to New Orleans unfamiliar with its legacy of hurricanes.

After asking these questions, I proceeded to ask questions aimed at answering research question one: Whether transportation disadvantaged individuals of New Orleans were receiving the message of New Orleans CAEP. To determine whether the transportation disadvantaged were receiving the message of the CAEP campaign, the participants were asked two questions. The first question was:

Please think about information that you have received about evacuating New Orleans during a hurricane if you do not have a car. This does not include information that you actively went looking for. From whom have you heard about evacuating New Orleans during a hurricane if you do not have a car?

The second question was: From whom have you heard about evacuating New Orleans during a hurricane if you do not have a car? The majority of the participants interviewed (41 out of the total 50) said that they had heard of the CAEP campaign. An African American, vehicle-less male in his 30s indicated that “yes, from the television” was where he had heard the message while an African American, mobility impaired woman in her 50’s indicated that “yes, people are talking about it in the neighborhood.”

When asked from what source they had received information about evacuating without a car, the most frequently cited sources were friends, relatives, television, and people canvassing their neighborhoods spreading information. None of the participants mentioned scientists, school officials, and entertainers. Surprisingly, radio reporters, newspapers, and the City of New Orleans’ website were not mentioned as sources for receiving preparedness information. Participants were also shown two brochures that were created to spread the CAEP campaign’s message. These can be seen in appendix G and appendix H. When shown these brochures, they were asked questions such as “Have you seen this
brochure before?” and “What do you think the creators of this brochure are trying to tell people?” None of the participants mentioned that they had seen the CAEP brochures prior to the interview. However, all were able to discern the brochures’ message after reviewing them.

The individuals who stated that they had not heard of the CAEP campaign fell into two categories. The first category was individuals who had just recently moved to New Orleans. For example, an interviewee (White male, vehicle-less, 40s) who revealed that he had been in New Orleans for only 2 months and another interviewee (African American female, vehicle-less), who said she had lived in the city for 11 months both explained that they were not aware of the CAEP campaign. A second category was individuals who were regular car users but were using public transportation on a temporary basis during the time I conducted interviews. Two men, one a chef in his 50s and another a store-worker in his 20s, told me they were not aware of the CAEP campaign because in their regular lives, they relied on cars but were using mass transit during the time of my interviews because their cars were being repaired.

After determining whether they had heard of the campaign, I moved to answer the second research question: Are transportation disadvantaged individuals in New Orleans paying attention to the message of the New Orleans City Assisted Evacuation Plan campaign? To determine whether the transportation disadvantaged were paying attention to the message of the CAEP campaign, the participants were asked three questions.

The first question was: Of the information you received about evacuating without a car, how much of it was from a government agency? Would you say all of it, some of it, or none of it? Can you describe the information?

The second question was: Of the information you received, how much of it was from a charity organization like the Red Cross? Would you say all of it, some of it, or none of it? Can you describe the information? The third question was: Since Hurricane Katrina, about how frequently have you
heard information about preparing for evacuation if you do not have a car?

From these questions, I found that a majority of the participants (41 out of the total 50) demonstrated that they were paying attention to the CEAP campaign. This was evident in that they were able to give detailed descriptions of the processes of the CAEP campaign (e.g., registering for help, waiting for the evacuation message to be sent, traveling to particular locations where they can be picked up). This quote from an African American, vehicle-less male in his 50s describing the CAEP campaign shows that the campaign was being paid attention to:

Well, they have the routes set up now. You can go by the buses, they have the shelters, they didn’t have that at first.

Another African American, vehicle-less male in his 30s also demonstrated that he was paying attention to the CAEP campaign:

Yes. It is all over the news. They come into the neighborhoods and ask people, do they want to sign up. They make a list of people. They got a place you can stop by and register.

Although the majority of the participants were able to give detailed descriptions about the processes of the CAEP campaign, they had trouble distinguishing whether they had obtained information from a government agency or a non-profit organization. When asked to give estimates of how much information they had obtained from a government agency as opposed to a non-profit, they were unable to answer. The participants reiterated that they had obtained the information from television news, friends/neighbors, or canvassing individuals. Hence, the participants were paying attention to the CAEP campaign (as evidenced by their ability to describe the CAEP processes) but were not necessarily paying attention on who was actually providing the message.

After determining whether they were paying attention to campaign, I shifted to examining the third research question: Are transportation disadvantaged individuals in New Orleans comprehending the message of the New Orleans City Assisted Evacuation Plan campaign? To answer this question, I
asked the participants the following question: How easy to understand was the information you have heard about evacuating if you do not have a car? Would you say not easy to understand, completely easy to understand, or somewhere in between? Please explain your choice.

This question was then followed up with this question: How much of the information that you heard about evacuating if you do not have a car did you believe? Would you say you did not believe any of it, believed all of it, or somewhere in between. Please explain your choice.

The responses revealed that the majority of the participants (41) were able to comprehend the message of the campaign. An African American, vehicle-less woman in her 50s explained that understanding the message of the CAEP campaign was not hard for people aware of New Orleans’ troubled history with hurricanes:

I understand what they are saying. My neighbors, a lot of them know about it too. Since Katrina, we want to get out of here. We won’t stay. We know about it.

An African American, mobility impaired woman in her 30s gave a similar response to the question:

I understand. I am leaving the day before when they announce that a hurricane is coming. On a bus.”

An African American, vehicle-less man in his 40s explained that:

I got caught up the last time during Katrina. I was at the Superdome. So yes, I understand what I am supposed to do. I will use the services at the first sign.

The participants stated that understanding the message of the CAEP campaign was not hard for two reasons. First, most had experienced the difficult ordeal of Hurricane Katrina and hence understood the necessity of a service that seeks to help the transportation disadvantaged during disaster. Second, most had also been compelled to evacuate during Hurricane Gustav when the city went to great lengths to ensure that no one was left behind. These experiences enabled the participants to
quickly grasp what the CAEP campaign was trying to convey.

Overall, therefore, reception, attention, and comprehension were significantly high among the participants. Only nine people among the 50 participants indicated not receiving, paying attention to, or comprehending the CAEP message. These individuals were either new comers into New Orleans or individuals whose primary mode of transportation was a car (but at the time of the interview, they were relying on buses until their personal vehicles had been repaired). Those who indicated receiving and paying attention to the CAEP campaign cited friends, relatives, television news, and people canvassing their neighborhoods as the primary sources of information for preparing for disaster. Due to their experiences with Hurricane Gustav and Hurricane Katrina, the majority of participants indicated they were able to comprehend the message of the campaign.

After asking the questions reception, attention, and reception, I paused to allow participants to consume the snacks I had brought to the interview site. During the first 2 interviews, I had gone through the questions non-stop. However, my participants showed discomfort at being questioned non-stop. So during the rest of the interviews, I paused between sections to allow the participants to rest (e.g., smoke a cigarette) and to allow me to figure out how the interviews were going. After the break, I moved to examining the fourth research question: Are transportation disadvantaged individuals in New Orleans engaging in risk identification?

Risk identification is phase when people ask themselves whether there is an actual threat they need to focus on. A common tendency among people is to continue to believe that their environment is normal even if messages say otherwise. Warning messages are commonly met with disbelief. In the risk identification stage, individuals attempt to ascertain whether a hazard actually exists. To determine whether risk identification was occurring, the participants were asked the following question: How likely is it that a hurricane evacuation will occur in the next 12 months? Would you say not at all likely, very definitely will occur, or somewhere in between. Please explain your choice.
The answers to this question revealed that reception, attention, and comprehension do not necessarily translate into risk identification. Among the participants, 34 stated that it was not likely a hurricane evacuation would occur in the next 12 months, 16 said it was probably likely, and none stated that it would definitely occur. The reasons for the belief that a hurricane evacuation would not occur varied. Some participants pointed to the seemingly cyclical nature of hurricanes and explained that hurricanes in New Orleans supposedly happen in five year phases. An African American vehicle-less woman in her 50s outlined this belief as follows:

It won’t happen cause the hurricane ain’t going to come till five years from now.

Other participants explained that the financial losses incurred when the city evacuated during Hurricane Gustav meant that city officials would be more cautious about calling for an evacuation in the future. These participants explained that many in their community felt that during Gustav, the city jumped the gun by calling for an evacuation during a hurricane that caused negligible damage to the city. In their view, during a future hurricane, the city is likely to be more reluctant about calling for an evacuation. They believe that vertical evacuation (e.g., sheltering in a high rise) or shelter of last resort (e.g., sheltering at the Superdome) will be used. A white vehicle-less male in his 40s described this view as follows:

Many people really wish they hadn’t left. It was like a big loss. It just seemed they missed out on going back to work really fast. Many people still have not found proper work after Gustav. I am working in a temp service. Many of my friends have not gotten steady jobs yet. So it was really a drag, it was a drag. They won’t ask us to leave unless it is really serious. The safest thing will probably be to go into a tall hotel like the Marriott.

After exploring risk identification, I moved to the fifth research question which was:

Are transportation disadvantaged individuals in New Orleans engaging in risk assessment?

In the risk assessment stage, individuals attempt to determine whether the hazard will affect
them personally. People ask themselves the question of whether they need to personally take protective action. Whether people personalize a threat hazard is dependent on factors such as how they view the probability of the event happening and its severity on them or their property. To determine whether risk identification was occurring, the participants were asked the following question:

If an evacuation were to occur, how serious do you think the impact on your life would be? Would you say not at all serious, extremely serious, or somewhere in between. Please explain your choice?

The answers to this question revealed that reception, attention, and comprehension also do not necessarily translate into risk assessment. The responses were as follows: 37 stated that an evacuation would not have a serious impact on their life, 13 stated that it would have somewhat an impact on their lives, while none stated that it would have a serious impact on their lives. The participants who stated that an evacuation would not have a negative impact on their lives mainly cited their preparedness experience as a reason. These participants explained that after Hurricane Katrina, they have developed a habit of always being prepared with resources, being aware of what is going on, and being able to secure appropriate transportation out of the city. An African American, mobility impaired woman in her 40s explained that regardless of the situation, she is always prepared to handle the challenges of an evacuation:

Well, I know I have my batteries, I said, I make sure my batteries is up to date. I got a
A safe light, and my radio, portable radio, you know, well I got two. I got one regular that says, uh, the weather on it and I check that all the way up to November the 30th I have ice, I have water, uh, I got canned goods. I made sure that the date on the goods is 2012. You know, I got a can opener, two can openers really. One the regular can opener and one which you pop up. So hell, I got all of these in one these containers so all I got to do is when I am told to leave, I pick it up and leave.
Another African American vehicle-less woman in her 40s echoed this view and stated that her supplies are what would enable her to handle an evacuation efficiently:

Well I put money up. Save so in case I have to leave and um, have food supplies and make sure I have the necessary stuff to get out of town

This view was also shared by an African American mobility impaired man in his 30s

I get prepared by, you know, water, you know supplies, batteries, stuff like that. I make sure my house is secured. Basically, safety, caution. That way I am always prepared for travel.

An African American vehicle-less woman in her 50s explained that her constant monitoring of the news meant that it is unlikely she would be caught off guard in a hurricane evacuation:

Well, first of all, I watch the news a lot. Then I watch for the weather, what is happening with the weather. And if I don’t get nothing like negative, I move on to the next day. But if something negative come up, I watch the news all night. And at the first sign of whatever, then I am ready to get out.

The next stage after examining risk assessment was to focus on the sixth research question: Are transportation disadvantaged individuals in New Orleans engaging in protective action search?

Protective action search occurs when people judge a threat to be real and that there is a high chance that it will personally affect their lives. In this stage, people ask themselves what can be done to achieve protection. To find answers, people can turn to their memory (their past experience with disasters can give them a clue what to do), to neighbors, or disaster preparedness campaigns that give recommendations on how to achieve protections. To determine whether protective action search was occurring, the participants were asked the following question:

Now I want to know if you have actively looked for information about preparing for an evacuation if you do not have a car. After Hurricane Katrina, how frequently have you tried to get information about evacuating New Orleans without a car? At least daily, At least weekly
At least once a month, A couple times a year, At least once a year, Never

After this question, several follow-up questions were posed:

Did you actually get any information? Did you understand the information that you got?

Did you think about the information that you got? Did you discuss the information that you got with other people?

The responses were as follows: 11 participants stated that a couple times a year they had actively looked for information about preparing for an evacuation when one does not have a car. Another 30 stated that at least once a year, they had searched for information about evacuation when one is vehicle-less, and 9 stated that they had never searched for information about vehicle-less evacuation. Those who indicated searching a couple times a year were mainly mobility impaired participants. They explained that ensuring that they have transportation for potential emergencies is a critical part of their routine. Since they relied on para-transit, they were often searching for and updating their transportation options to make sure that in the case of an emergency, they will have a way to evacuate. An African American mobility impaired woman in her 40s explained it as follows:

After Katrina, I learned that no one plans for those of us that use wheelchair

I have to plan for myself. I got to make sure people know what they are supposed to.

Not just day to day. But if something happens bad, I have to make sure I have transportation.

So I am always checking when I get a chance.

In contrast, the majority of the participants (30) explained that at most, they looked for information about evacuation without a car once a year. This search was usually prompted by the start of the hurricane season when personal conversations and media coverage centered on making sure people in the city are prepared. At other times of the year, searching for this information was not a priority. Those who indicated they never searched for information on evacuating were individuals who were using transit on a temporary basis or new comers to New Orleans unfamiliar with preparedness
resources in the city.

Following my exploration of protective action search, I moved to the seventh research question which was: Are transportation disadvantaged individuals in New Orleans engaging in protective action assessment? Protective action assessment occurs when people have identified a way to address the threat. Before adopting the solution, they evaluate it by comparing it to other forms of action (e.g., ignoring the threat). They ask themselves what is the best method of protection. When evaluating, individuals can assess a protective action by examining whether it will be effective in countering the threat, whether it might lead to other negative outcomes (e.g., evacuating may give people a chance to loot) and whether it is safe (e.g., evacuating can result in worsening health risks for some). In addition, people can assess protective active actions based on how much time they take to implement (people often dislike undertaking time consuming tasks), the barriers (whether preparedness tasks require skills, equipment, special knowledge) and costs (whether the tasks are expensive).

To determine whether protective assessment was occurring, the participants were asked the following questions:

If a hurricane evacuation is announced, would you use the evacuation transportation the city of New Orleans provides for people without cars? If yes, why would you use the transportation?

If no, why would you not use the transportation?

The responses were as follows: 23 stated they definitely will not use the transportation provided by the CEAP program, 16 responded they will probably will not, 8 stated that they will probably will, and 3 stated they will definitely will. When pressed to explain their ambivalence toward the CAEP campaign, a key reason participants gave is the inefficiency of the New Orleans transit system. When an evacuation is announced in New Orleans, the first part of the evacuation is handled by the New Orleans Regional Transport Authority (RTA) which is responsible for day-to-day operations of buses and streetcars in the city. During an evacuation, the RTA buses are supposed to pick people from
dedicated pick-up locations and transport them to the New Orleans Superdome, convention center, airport, and train stations where they will board long-distance buses, trains, and planes out of the city. The participants skeptical of CAEP argued that the inability of the RTA to function properly during non-disaster times made them skeptical about relying on the service during a disaster. An African American vehicle-less man in his 40s summarized this sentiment as follows:

I wouldn’t count on this bus coming. How are you supposed to get to the train station in a hurricane if the buses can’t run on time on a regular day. The system is not what it used to be. Before Katrina, I used to rely on the bus every 20 minutes or so. Now you looking at 30, 40 minutes wait. Cause they changed the service so much. And they constantly moving the bus stops. And you really don’t know what to do. You be at a bus stop that was closed last week and the bus will pass you up now. It’s a constant, it’s a lot of confusion with the construction. The company hired to run the buses and the city are not working together. They have to work better to provide better service for the city.

An African American woman in her 30s expressed a similar view:

You are taking life in your own hands if you rely on the bus service. Right now, I would say the service is about average. The buses are better but the service is a little bit different now. The service isn’t as good. It takes longer. They coming back online to most of the services but the services is longer. See before, you would wait 15 minutes. Now you have to wait 20 minutes or even half an hour. And the schedule is like. This bus is supposed to be here at 2:10. I bet you it won’t be here. The buses run 20 or 30 minutes behind schedule.

An African American vehicle-less man in his 40s echoed the above views:

After the Katrina thing, I am very hesitant. Not enough buses on the line. The timing is in appropriate for a working person, you know. It doesn’t start early enough and it ends too early. When pressed on how they would evacuate if they did not use the CAEP, the participants
primarily cited turning to family members with cars for evacuation assistance or making sure to leave a couple days prior to the evacuation when the transportation choices for leaving the city would be more numerous.

The participants who expressed a willingness to use the CAEP resources during a future disaster were those who had used it during Gustav without any glitches. An African American woman in her 20s explained her confidence in the RTA and CAEP as follows:

It has its times when it is excellent and it has its times when it is in the middle when it runs slow on the weekends. It is pretty efficient for getting people around but it could do better.

I would not hesitate using when an evacuation was called.

The concluding section of my interview with the transportation disadvantaged focused on the eighth research question: Are transportation disadvantaged individuals in New Orleans engaging in protective action implementation? Protective action implementation happens when all the questions have been answered well and a means to counter the threat has been identified. Individuals ask themselves the question whether the protective action needs to be taken immediately and if the need is found to exist, they implement it. To determine whether this was occurring the participants were asked:

How likely is it that in the next 30 days you will do something more to prepare for evacuating New Orleans without a car? Would you say it is extremely unlikely, somewhat unlikely, somewhat likely, or extremely likely that you will do something? Please explain your choice.”

The responses were as follows: 43 stated it was extremely unlikely they would take steps and 6 stated that they were somewhat likely. When pressed to explain why they were unlikely to take any steps, the participants explained that the bulk of the hurricane season had passed (many of the interviews were conducted in October and November) meaning the chance of a major storm was unlikely.
Those who stated they were somewhat likely to take steps explained that due to their mobility impairments, they try to make sure they have updated transportation options in case of an emergency. An African American woman in her 50s explained it as follows:

I lost my family. So I would not want to go through that again. And that went on for 2 months. And that is the reason why I am always checking to see that if something happens, I can get out.

Excellence and the City Assisted Evacuation Plan

During the second part of the project, I sought to understand whether the CAEP campaign exhibited the characteristics of public relations excellence at the program, departmental, and organizational levels. As explained earlier, this segment proved to be the most challenging. After asking a disaster expert to preview the protocol for decision makers familiar with how the CAEP campaign is run, the expert explained that decision makers would find the questions confusing because in the questions, I referred to the CAEP campaign as a public relations campaign. The expert explained that it was unlikely that the decision makers would view the program solely as a public relations campaign. The expert pointed to questions like the following as problematic:

Some people describe the purpose of a public relations program like CAEP as a conversation between city residents and emergency managers. Instead of just telling people what to do, emergency managers listen to the concerns people and create preparedness programs based on these concerns. Would you say this definition matches the goal of the CAEP program? If yes, why do you say so? If no, why does it not match the goal of the CAEP program?

Since many people have a limited understanding of what public relations is, the expert warned that references to public relations would confuse interviewees experienced in disaster management but unfamiliar with the concept of public relations. The expert recommended removing the reference to public relations and rephrasing the question as:

Some people describe the purpose of a program like CAEP as a conversation between city
residents and emergency managers. Instead of just telling people what to do, emergency managers listen to the concerns people and create preparedness programs based on these concerns. Would you say this definition matches the goal of the CAEP program? If yes, why do you say so? If no, why does it not match the goal of the CAEP program?

In response to this recommendation, references to public relations were removed in the questionnaire. Instead, the word program remained. A second challenge that emerged was the length of the protocol. The expert explained that the protocol was too lengthy and would be met with resistance from disaster managers with limited time on their hands. Following this advice, several questions were removed. The questions excised were those that asked the disaster managers to comment about other programs aside the CAEP. Sticking the questionnaire primarily to CAEP reduced the questionnaire to a shorter size. However, it also meant that conclusions regarding excellence at the program, departmental, and organizational level would be limited to the CAEP campaign. While truncating the protocol, care was taken not to introduce new questions or concepts.

After the truncated protocol was completed, the decision makers were approached to participate. The original plan was to interview 5 decision makers familiar with the CAEP program. After emails were sent to 15 decision makers deemed familiar with the program, 2 decided to give their input. This response rate was disappointing. However, the decision not to participate was understandable. My interview questions would require participants to comment about their jobs and employer (the city of New Orleans). As an employee, talking about an employer can be a challenge. Many organizations have a strict policy against commenting to researchers. During these days when dissertations can be searched on the web in seconds, it is understandable that interviewees were leery about getting their views known regarding the CAEP campaign and the organization in which they work. In addition, many influential people in New Orleans are experiencing what can be termed as research fatigue. Numerous articles, books, dissertations, and documentaries about New Orleans have
been produced and the same small group of decision makers is often called to answer questions. Tired of being distracted from their day-to-day work, many decision makers now simply refuse to participate in Katrina-related research.

The response rate meant that I had to modify my data collection methods in response to interviewee requests or risk not having anyone to interview at all. Originally the plan was to interview the participants for about 1 hour in the same manner I had interviewed the transportation disadvantaged. However, one of the two the participants who agreed to participate explained that she would like to see the questions first before agreeing to sit down for an interview. After reviewing the consent form and the questions, this participant proceeded to write down answers and email them back to me. This introduced an unexpected complication because I had not planned on collecting data in this manner. Not knowing what to do with this data, I conferred with an expert on research ethics at the University of Illinois. The expert explained that it would be okay to utilize this information because I could analyze it along with the secondary documents (e.g., website, flyers, and news articles) that I was already examining to gain insight into the CAEP campaign. The expert, however, explained that I would need to protect the email conversations in the same manner that I would with the recorded interviews. The expert also recommended that to avoid analysis issues at a later date, I should ask the second participant to submit response in a similar manner. I heeded this advice and the two participants submitted their information in written, electronic format. The following section presents findings from their responses.

The first part of the questionnaire aimed at understanding research question nine: Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the program level? Excellence at the program level is evident when a program is managed strategically. This means that effective public relations practitioners do not communicate just for the sake of communicating. Rather, practitioners identify (through research) the audiences that
need to be reached and how to best reach them. When public relations campaigns are carried out, they are assessed to see whether they are effective in reaching their targeted audience. Managing strategically is a move away from communicating blindly (and hoping it accomplishes something). Instead, practitioners plan before communicating and assess what they are doing.

In the case of the CAEP campaign, evidence of strategic management was evident by from the participant responses and from a review of documents related to the CAEP program. To ascertain strategic management, the participants were asked the following question: Before creating the City Assisted Evacuation Plan program (CAEP), what type of research did the city's emergency managers conduct on how to create such a program?

A participant gave the following response:

In 2006, the DOT in cooperation with the DHS conducted a study evaluating emergency planning in the Gulf Coast region. Using the results of this study, city leaders developed the CAEP to address the needs of New Orleans' most vulnerable populations in the event of an emergency.

This response was supported by evidence contained in documents related to the formation of the CAEP campaign. Amdal and Swigart (2010), in their report titled Resilient Transportation Systems in a Post-Disaster Environment, examined planning and research that was conducted prior to forming the CAEP campaign. They explain that those in charge of implementing the CAEP campaign (e.g., the city, transit providers, state officials, federal officials) studied in detail why evacuation of the transportation disadvantaged was botched during Hurricane Katrina. Based on the lessons learned from the past, they created a CAEP process that addressed the weaknesses of the past. For example, the planners found a key reason that some transportation disadvantaged did not evacuate during Hurricane Katrina was because they believed that sheltering in a high rise (referred to as vertical evacuation) or at a shelter of last resort (e.g., the Superdome) were both viable options during a hurricane. When
designing the CAEP campaign, the planners made it clear that vertical evacuation and shelter of last resort were no longer options for the transportation disadvantaged. Everyone, when the CAEP process is triggered, is expected to leave the city. Lessons learned from Hurricane Katrina were therefore crucial when designing the communication component of CAEP.

To ascertain strategic management, the participants were also asked whether the CAEP campaign has evaluated the effectiveness of its communication efforts. The following question was posed to the participants: How has the city of New Orleans measured the success of the CAEP program?

A participant responded by explaining that the CAEP organizers have not only “kept count of how many people used different aspects of the CAEP, including public shelters, transportation” but also have carried out surveys in which the transportation disadvantaged have been quizzed on “how effectively they thought” the program is run and “whether or not they would use it again.”

This response was supported by evidence contained in documents related to how the CAEP campaign is run. Following the first test of the CAEP during Hurricane Gustav (which was deemed a success because 95 percent of the city evacuated), the program’s organizers commissioned a survey to learn what the transportation disadvantaged thought about the program. Researchers from the University of New Orleans were provided funding and asked to survey individuals who evacuated during Gustav. The survey in which 364 people were interviewed revealed that although the evacuation rate was high, there were several issues that need to be addressed to ensure the CAEP program is effective in the future (Keifer, Jenkins, & Laska, 2009). The first issue was finances. Some evacuees incorrectly believed that in order to participate in the CAEP program, they had to pay for lodging, transportation, and food. This misunderstanding may have dissuaded some from participating. A second issue identified was that in families with elderly members, the elderly were often reluctant to evacuate. This meant that many faced difficulties leaving because they found it hard to convince the
elderly to evacuate. A third issue identified was safety: some evacuees felt that the bus drivers hired to evacuate people were untrained and unprepared (e.g., they lacked knowledge of the local area). A fourth issue was shelters: some evacuees reported that staff at some evacuation shelters made the evacuees feel unwelcome and the shelters felt unsafe. A last issue was the process of returning evacuees back into New Orleans: some evacuees complained that they were returned into neighborhoods that were not ready for people (e.g., utilities were still off, there was limited transportation to get people back to their homes). These findings were presented to the organizers of the CAEP program to review.

Research, therefore, has been an integral part of the CAEP campaign. Prior to creating the campaign, decision makers studied the situation in New Orleans in order to learn facts that would help in constructing an effective preparedness program. After the CAEP was first tested in 2008, additional research was carried out to assess the campaign’s effectiveness. The campaign can be said to demonstrate excellence at the program level because prior to communicating, the organizers worked to understand the situation and after communicating, they conducted research to determine whether they were communicating effectively. These findings, however, should be treated with caution because the participant sample of 2 is very limited to draw conclusions from. And the fact that interviews were not conducted and instead email was used to collect data is also a limitation.

The second part of the protocol for decision makers focused on answering research question ten: Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the departmental level? Excellence at the departmental level entails eight characteristics. First, staff in charge of public relations should be integrated or work in a single unit. This avoids the situation where they are scattered around the organization and lack power to shape how things are done within the organization. Second, the unit in charge of public relations should be separate from other units (e.g., marketing, advertising). These two other fields have different
priorities and when the public relations function is combined with them, the goal of the public relations unit can get distorted. Third, the public relations unit should be able to directly report to senior managers in the organization. This direct line avoids scenarios where the views of the public relations unit are distorted when they have to go through marketing, or other units whose priorities can differ from the public relations unit. Fourth, the unit should practice two-way symmetrical public relations that aims to balance the interests of an organization and its public, is based on research, and uses communication to manage conflict with key publics. Fifth, the public relations unit should be headed by a manager who conceptualizes and directs public relations programs. Having someone in a manager role can avoid situations when an outside manager, with a distorted view of public relations, is leading the unit. Sixth, the staff in the public relations department should have the knowledge to practice two-way symmetric public relations (an approach that values dialogue as opposed to manipulation), to serve as managers, and should have some academic training in public relations. Lastly, the staff should not be homogeneous but should reflect the diversity in their environment (Grunig et al., 2002).

To ascertain excellence at the department level, the participants were asked two questions. The first question sought to determine whether the manager of the CAEP campaign has a direct reporting relationship to senior management in the city of New Orleans.

In your view, do New Orleans city officials in charge of emergency preparedness have a direct line to the leaders of the city? In other words, can they talk to the mayor and other senior leaders without having to grow through junior staff?

A participant stated that this was in fact the case:

Yes they do. NOOHSEP (New Orleans Office of Homeland Security and Emergency Preparedness) frequently meets with the mayor and works directly with senior leaders. One of the Deputy Mayors is in charge of NOOHSEP and is always readily available

This assertion was supported when I examined how the city of New Orleans is organized. The
chain of command (see the organizational chart in appendix I) in the city of New Orleans government is that the head of the CAEP campaign (the deputy mayor for public safety and homeland security) has a direct reporting relationship to the most 3 most powerful people in the city: the first deputy mayor (who oversees the day to day running of city hall), the deputy mayor (in charge of policy) and the mayor. Hence, the way the bureaucracy is structured is that the head of CAEP can report to key decision makers without having to go through layers of bureaucracy. This system of organization was created by Mayor Mitch Landrieu (the second mayor elected after Hurricane Katrina) to eliminate what many experts agreed was as a convoluted organizational structure with too many layers of bureaucracy. In this new system, the deputy mayors have been empowered and can report directly to the mayor without interference.

A second question I asked was: In your view, do the transportation disadvantaged in New Orleans give input into how the CAEP program is run? If yes, in what way (s)? This question sought to determine whether the CAEP campaign practiced two-way symmetrical public relations which strives to balance the interests of an organization and its publics, is based on research, and uses communication to manage conflict with key publics.

A participant answered that the CAEP program does indeed embody two-way symmetry. She explained that the CAEP campaign has made “a lot of effort to contact all users of the CAEP to gain their input and has reached out to community partners that are most strongly connected to New Orleans' vulnerable population.” A review of documents related to the CAEP also provided support for this assertion. Integral to the CAEP campaign are surveys, formal and informal, that aim to gain input from the transportation disadvantaged in New Orleans. The most significant survey was by University of New Orleans (explained in a section earlier), which sought to find ways the CAEP campaign can improve. In addition to this survey, the CAEP campaign runs a yearly evacuation drill to test the city’s preparedness. These drills help the campaign planners learn from community members on areas of that
can be improved. These outreach efforts illustrate a commitment to two-way symmetrical communication.

To determine whether the CAEP campaign exhibits the remaining aspects of excellence (staff integrated in a single unit that is separate from other functions; unit headed by a manager; diversity among the staff), I reviewed documents related to the CAEP (e.g., organizational charts, websites, reports,). These documents revealed that the staff responsible for the CAEP campaign do work in a single integrated unit that is headed by a manager and is separate from other functions. The chain of command (see the organizational chart in appendix I) in the city of New Orleans is that the CAEP campaign is operated by the Office for Public Safety and Homeland Security. This office, headed by a Deputy Mayor, oversees other entities in charge of disasters issues (the fire department, the emergency services department, the police department). Therefore, even though disaster preparedness staff may work in separate departments (e.g., police, fire, EMS), these individuals report directly to a Deputy Mayor of Public Safety and Homeland Security who oversees everything. The CAEP campaign is central to the Office for Public Safety and Homeland Security and those who work on it operate under a single unit. I evaluated the diversity in staffing by researching the backgrounds of those in charge of the CAEP campaign. This revealed in that in terms of race/ethnicity and gender, those in charge of CAEP did reflect the diversity present in New Orleans. These findings should also be treated with caution because the participant sample of 2 is very limited to draw conclusions from. And the fact that email, instead of interviews, was used for data collection is also a limitation.

The final part of the protocol for decision makers focused on research question eleven: Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the organizational level? Excellence at the organizational level entails the following things. The organization in which a public relations unit is located in should value engaging dialogue with its publics, should give the head of the public relations department a voice when major decisions
are made, should have a participative culture, a symmetrical system of internal communication, and an organic structure. It also helps if the organization has a complex turbulent environment with pressure from activist groups (Grunig et al., 2002).

To determine organizational excellence, I asked five questions. The first was: In your view, does the City of New Orleans government strive to listen and engage in dialogue with its residents? A participant responded as “that it does to an extent, but this is an area that is still in dire need of improvement.” A second question I asked was: In your view, when leaders of the City of New Orleans are deciding the city's budget, how much importance is given to the needs of the CAEP program? A participant responded as follows:

Not as much importance is given to the CAEP as is needed when it comes to deciding the city's budget. Non-profit organizations have filled in the gaps where the local government is unable to perform during an evacuation, but they does not receive any funding from the City of New Orleans.

A third question I asked was: One emergency manager once told me that when there is a budget cut in her city, it is usually the disaster preparedness program that are cut. Would you say this statement matches the status of disaster preparedness in New Orleans? If yes, why do you say so? If no, why does it not match?

A participant responded:

Yes, I feel that the city is not nearly as prepared as it should be in the event of a disaster. It isn't until a hurricane poses an imminent threat to the city that we start worrying about disasters as much as we should.

The fourth question I asked was: In your view, is the City of New Orleans government an organization in which junior staff can easily get their views heard by those at the top? A participant responded as follows:
The City of New Orleans is actually a very close-knit community, so it's not difficult for a junior staff to get in touch with one of the senior leaders.

A final question I asked was: In your view, is the City of New Orleans government an organization in which employees are encouraged to speak up? A participant responded by stating:

Yes it is. But it definitely requires a level of assertiveness from it's more junior employees.

The participants’ responses revealed that they viewed the City of New Orleans (as an organization) as one in which preparedness issues are important but not always given top priority. Although the leaders of the CAEP campaign have access to the key city managers, the issues they are in charge of are not always given priority. The participants also stated that although the city strives to engage its residents in dialogue, this does not always occur. The same was said regarding internal communication: although the city’s government is a small community, junior staff has to be assertive in order to get their voices heard.

The CAEP campaign, therefore, can be said to exist in a city of New Orleans government that is striving toward excellence at the organizational level but has yet to achieve it. A review of documents supported this finding. The Bureau of Government Research (a non-profit which since 1930 has been the premier think tank on the city of New Orleans) has extensively studied how the city government is organized. Its reports published after Hurricane Katrina agree with the participants recommendations that the city needs to pay more attention to preparedness issue, needs to better listen to its residents, and needs to improve the nature of internal communication (Bureau of Government Research 2010a; 2010b). As explained earlier, these findings should be treated with caution because of the small participant pool and the use of email as a data collection tool.

Summary

In conclusion, the findings can be summarized as follows. Data collected from the transportation disadvantaged revealed that the majority of the transportation disadvantaged in New
Orleans were receiving, paying attention to, and comprehending the message of the CAEP campaign. However, receiving, paying attention to, and comprehending were not shown to automatically translate into high levels of risk identification, risk assessment, protective action search, protective action assessment, and protective action implementation among the participants. Some participants stated that they believed the seemingly cyclical nature of hurricanes in New Orleans meant that the possibility of another hurricane happening soon was minor. Other stated that the fact the city lost money during Hurricane Gustav (an evacuation some argue was unnecessary) meant that city managers would be reluctant to call for an evacuation in a future storm event. Several participants pointed to their past experience with hurricanes as evidence that they are unlikely to be caught off-guard in future disasters. Conversely, some participants cited past negative experiences with disaster as reasons why they were engaging in protective action implementation. Whether people have experienced a disaster in the past was not found to be a useful predictor of whether people would engage in protective action search, protection action assessment, or protective action implementation.

The participants who indicated that they frequently proactively searched for evacuation preparedness information were primarily individuals with mobility impairments who explained that securing emergency transportation was something they considered important. In contrast, vehicle-less, non-mobility impaired individuals stated they searched for evacuation preparedness information only when prompted by external cues (e.g., the media, discussion among friends). In regards to protective action assessment, participants who stated that they would not use the transportation provided by the CAEP campaign were those dissatisfied with the service provided by the New Orleans Regional Transit Authority (RTA). These participants argued that the problems with the RTA made them skeptical that it would provide efficient service in a future disaster. Protective action implementation was primarily seen among mobility impaired individuals who explained that ensuring that they have emergency transportation is something they always do. In contrast, the vehicle-less reported implementation only
when prompted by external cue like the announcement of the start of the hurricane season.

In regards to excellence, the CAEP campaign was found to exhibit excellence at the program and department levels (These findings, however, should be treated with caution because the participant sample of 2 is very limited to draw conclusions from). Research before and after communicating was found to be a core part of the CAEP campaign. The manner in which the CAEP campaign is administered is aimed at ensuring the program has a voice among the major decision makers in the City of New Orleans. In addition, the CAEP organizers make a great effort to confer with the publics that they affect. At the organizational level, however, the CAEP campaign can be said to exist in organization that is striving toward excellence. Although structurally, the city government is organized in a manner to promote excellence, obstacles exist to make this difficult. In Chapter 5, I discuss the findings in detail and present recommendations for future research.
CHAPTER 5. DISCUSSION

This chapter concludes the dissertation and opens with a brief description of the purpose of the research and a summary of the findings. This is followed by four sections that discuss the insights and implications that can be drawn from the research. The first section explains how this project’s findings contribute to the Protective Action Decision Model. The second section explains how the project’s findings contribute to the Situational Theory of Publics. The third section outlines how this project sheds light on the issue of past experience and disaster. The fourth section explains how the findings regarding vehicle-less and mobility impaired individuals provide additional insight on demographic characteristics and disasters. The final section provides suggestions for future research and addresses the limitations of this project.

Summary of Findings

The purpose of this study was to assess the effectiveness of New Orleans City Assisted Evacuation Plan in preparing the transportation disadvantaged for disaster during the 2010 hurricane season. Assessing effectiveness was done in two ways. The first way was by determining whether the transportation disadvantaged in New Orleans were receiving the campaign’s message, paying attention to the message, comprehending the message, and making decisions on how to prepare for a future disaster. The second way was by determining whether the public relations component of the CAEP campaign matched excellence theory perspectives on how public relations campaigns should be organized at the program, department, and organizational levels.

The following research questions guided the project:

1. Are transportation disadvantaged individuals in New Orleans receiving the message of the New Orleans City Assisted Evacuation Plan campaign?

2. Are transportation disadvantaged individuals in New Orleans paying attention to the message of the New Orleans City Assisted Evacuation Plan campaign?
3. Are transportation disadvantaged individuals in New Orleans comprehending the message of the New Orleans City Assisted Evacuation Plan campaign?

4. Are transportation disadvantaged individuals in New Orleans engaging in risk identification?

5. Are transportation disadvantaged individuals in New Orleans engaging in risk assessment?

6. Are transportation disadvantaged individuals in New Orleans engaging in protective action search?

7. Are transportation disadvantaged individuals in New Orleans engaging in protective action assessment?

8. Are transportation disadvantaged individuals in New Orleans engaging in protective action implementation?

9. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the program level?

10. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the departmental level?

11. Does the New Orleans City Assisted Evacuation Plan public relations campaign exhibit the characteristics of excellence at the organizational level?

The findings from the study fall into two major categories. In the first category are findings that shed light on whether the transportation disadvantaged in New Orleans were receiving, paying attention to, comprehending the message of the CAEP campaign as well as engaging in decision making related to it. These findings are summarized first. In the second category are findings that show whether the CAEP campaign exemplified excellence at the program, department, and program levels. These are discussed last.

A majority of the participants interviewed said that they had heard of the CAEP campaign. Individuals who stated that they had not heard of the CAEP campaign were either individuals who had just recently moved to New Orleans, or regular car users who were using public transportation on a
temporary basis during the time I conducted interviews. The majority of the participants also demonstrated that they were paying attention to the CEAP campaign because they were able to give detailed descriptions of the processes of the CAEP program such as how to register and what to do when an evacuation has been announced. The majority of the participants were also able to comprehend the message of the campaign. Participants stated that understanding the message of the CAEP campaign was not hard because they had experienced the difficult ordeal of Hurricanes Katrina and Gustav so they understood the necessity of a service that seeks to help the transportation disadvantaged during disaster.

The responses revealed that reception, attention, and comprehension do not necessarily translate into risk identification, risk assessment, protective action search, protective action assessment, or protective action implementation. In regards to risk identification (recognizing that a threat exists), the majority of the participants (34) stated that it was not likely a hurricane evacuation would occur in the next 12 months. Those who stated that a hurricane evacuation would not occur cited the seemingly cyclical nature of hurricanes while others stated that the city, wary of wasting money, will hesitate in calling for an evacuation in the future. In regards to risk assessment (recognizing that a threat can affect one personally), a majority of participants (37) stated that an evacuation would not have a serious impact on their life. The participants who stated that an evacuation would not have a negative impact on their lives mainly cited their preparedness experience as a reason. They explained that after Katrina, they have developed a habit of always being prepared with resources, being aware of what is going on, and being able to secure appropriate transportation out of the city.

In regards to protective action search (searching for ways to address a threat), the responses revealed only few of the participants (11) frequently searched for information about evacuation without a car. The individuals who indicated searching frequently were mainly mobility impaired participants who explained that ensuring that they have transportation for potential emergencies is a critical part of
their routine. In regards to protective action assessment (comparing a way to address a threat with other methods), most stated that they will either will not use the CAEP program in a future disaster (23) or will probably will not use it (8). A key reason for not planning to use the CAEP program was dissatisfaction with the inefficiency of the New Orleans transit system. Lastly, in regards to protective action implementation (taking steps to actually prepare for a disaster), the majority of the participants (43) stated it was extremely unlikely they would take any steps to prepare for a hurricane in the 30 days following the interview. When pressed to explain why they were unlikely to take any steps, the participants explained that the bulk of the hurricane season had passed meaning the chance of a major storm was unlikely. Those who stated they were somewhat likely to take steps to prepare for a hurricane in the 30 days after the interview were mobility impaired individuals who explained that they try to make sure they have updated transportation options in case of an emergency.

Participants in charge of the CAEP campaign (as well as documents related to the program) revealed that the CAEP campaign, exhibits excellence at the program and departmental levels. However, at the organizational level, it does not. Since only two participants provided input on this part of this research project, these findings should be treated with caution.

In regards whether the CAEP is managed strategically at the program level, the participants explained that research into understanding publics was a key element when the CAEP program was being formed and evaluation of publics is a core component after communication is carried out. The responses were supported by a review of documents related to the formation of the CAEP campaign. The documents showed that planning and research was conducted prior to forming the CAEP campaign. In addition, extensive evaluation was conducted after campaign implementation.

Responses also revealed that the CAEP campaigns exhibits excellence at the departmental level. The participant responses revealed that the CAEP campaign is one in which those running the campaign have a direct reporting relationship to decision makers in the city of New Orleans and is also
a campaign that is run in a two-way symmetrical manner in which the transportation disadvantaged give input in how the campaign is run. A review of documents provided support for these findings.

In regards to excellence at the organizational level, responses revealed that CAEP campaign did not exhibit this. The participants’ responses revealed that they viewed the City of New Orleans (as an organization) as one in which preparedness issues are important but not always given top priority. Although the leaders of the CAEP campaign have access to the key city managers, the issues they are in charge of are not always given priority. A review of documents supported this finding. In these sections, I discuss four insights and implications that can be drawn from these findings as well as recommend areas of future research.

Implications

The Protective Action Decision Model: This project demonstrates the value of utilizing the Protective Action Decision Model (PADM) as a tool for assessing preparedness programs. What the PADM was able to accomplish when applied to the New Orleans CAEP is illustrate gaps and problem areas that need to be addressed. Specifically, it showed reception, attention, and comprehension does not necessarily result in risk identification, risk assessment, protective action search, protective action assessment or protective action implementation. The advantage of the model is that it can be easily transformed into a set of easy to understand criteria and questions that can be used by emergency managers to assess their own preparedness programs. There do exist criteria that have been used to evaluate the effectiveness of preparedness campaigns. The PADM, however, is comprehensive in that it covers many facets of the preparedness process and also translates esoteric ideas from other fields into understandable ideas relevant day-to-day emergency planning.

What the findings did not show, however, is whether the PADM should serve as a structure for planning and implementing preparedness campaign. The PADM is useful as a tool for identifying gaps but the research did not show that if a campaign is structured to fulfill all elements of the PADM, it will
succeed in getting people to evacuate. PADM, hence, should not be viewed as a magic tool that, if one simply fills in the boxes, the result will be a preparedness campaign that results in people following the campaign’s recommendations. There is still so much that we do not understand regarding about what makes people adhere or ignore the recommendations of a communication campaign. The desire, among practitioners and scholars, is often for a one-size fits all model that can be utilized to address the challenges of communicating with people. Various books are filled with models whose architects argue that if the models are followed, communication challenges can be overcome. This, in my view, is not how the PADM should be viewed. It should be seen an evaluative tool to spot gaps that need to be addressed but practitioners should be careful about viewing it as way a model to construct their campaigns.

The Situational Theory of Publics: Since its inception, the Situational Theory of Publics has undergone several transformations. Kim and Grunig (2011), for example, have addressed what some saw as initial limitations of the theory by the developing the Situational Theory of Problem Solving. The findings in this study, however, demonstrate the value of the Situational Theory of Publics in its original format and but also some of its limitations. The findings illustrate that approaching public relations campaigns from a Situational Theory of Publics perspective (which is a key tenet in many undergraduate and master’s programs in public relations) should still be encouraged but the limitations of the approach should be explained.

The Situational Theory of Publics, as outlined earlier in the literature review chapter, has three key concepts. The first concept is problem recognition: the extent to which individuals recognize a problem they are facing. Grunig (1997) argued that individuals do not think about a situation unless they view that a need exist for something to be done to improve a situation. For example, people will not clamor for improvements in disaster shelters unless they view that current disaster shelters are inadequate. The findings in this study demonstrated this aspect also. Individuals who had recently
arrived in New Orleans and not experienced the challenges of disaster were not cognizant of the challenges of vehicle-less evacuation. Those in charge of preparedness campaigns, hence, have to work hard to reach those who do not recognize a problem where one actually exists.

A second key concept of the Situational Theory of Publics, constraint recognition, is the extent to which an individual views his or her behavior as limited by factors beyond his or her own control. Constraints can be physical (e.g., a person can lack the money or transportation to engage in preparedness activities) or psychological (e.g., a person can believe that her or she lacks the mental capacity to make sense of preparedness instructions). The findings in this study illustrated that, removing constraints has to be done carefully because removing constraints does not necessarily translate into people following a campaign’s recommendations. In the case of New Orleans, a key constraint (the lack of affordable disaster evacuation transportation) has been removed with the introduction of the CAEP. This move, however, has not meant that the reservations that some people have about vehicle-less evacuation have been removed. Confidence in the vehicle-less evacuation program has been hurt by the inefficiency in the daily transit program. Even through CAEP is probably likely to function effectively in a future (as demonstrated during Hurricane Gustav), its association with the much-maligned RTA transit system has led some New Orleans residents to be skeptical about CAEP. The lesson from CAEP, therefore, is that removing constraints is not enough. Even when significant constraints are removed, care should be taken to ensure that other factors do not distract from the significance of the removal of the constraint and lead publics to focus on other deficiencies.

A third key concept of the situational theory of public is level of involvement. This is how people feel a problem is emotionally and personally relevant to them. Grunig argued that involvement increases the likelihood of an individual paying attention to and acting on an issue. For example, if an individual lives close to a chemical plant that recently accidentally released toxic fumes into the air, he or she is likely to show interest in a campaign that aims to make the chemical plant safer. This study’s
findings illustrate that although level of involvement is critical, it is complicated. Just because individuals have experienced an issue close-hand (e.g., experienced a catastrophic disaster) does not necessarily make them receptive to preparedness campaigns. Other factors can intervene (e.g., confidence in decision-makers, a belief in their own preparedness) to hinder their willingness to follow preparedness instructions.

This discussion should not be interpreted as a criticism of the Situational Theory of Publics. As explained earlier, Kim and Grunig (2011) have transformed it into a Situational Theory of Problem Solving that addresses some of the issues brought up by my findings and also explains, in detail, how people consume information and make decisions. The reality, however, is that it is the Situational Theory of Publics (as with the excellence theory) which remains influential in the education of practitioners at the bachelors and master’s level. Discussions of the Situational Theory of Publics should be accompanied with a presentation of its limitations like the ones highlighted by this research. The beauty of the Situational Theory of Publics lies in its simplicity: getting practitioners to grasp it is relatively easy. Its strength, however, is also its weakness: it lends itself to simplistic conclusion drawing. The Situational Theory of Problem Solving has addressed these limitations but it is limited in one way: it is esoteric to the non-academic. It needs to be explained in a manner that practitioners can utilize to assess their actions in day to day practice. Dozier, Grunig, and Grunig (1995) addressed this when they wrote the Manager's Guide to Excellence in Public Relations and Communication Management which helped practitioners understand the excellence perspective. Kim and Grunig should consider also writing a similar monograph for the Situational Theory of Problem Solving. This can assist practitioners in moving beyond the Situational Theory of Publics and grasping the issues (highlighted by this project) that necessitate moving toward the Situational Theory of Problem Solving, a more refined theory.

Past experience and disaster: The findings in this study support existing literature which shows
that past experience is not a useful predictor on how people will behave in the future. The majority of
the participants in this study had experienced both Hurricane Katrina and Hurricane Gustav. However,
they demonstrated varying levels of risk identification, risk assessment, protective action search,
protective action assessment, and protective action implementation. Just because a person
experienced a catastrophic disaster in the past does not make him or her less or more likely to engage in
preparedness activities. These finding echo past research on experience and disaster. Lindell and
Perry (2004) noted that past experience is not reliable predictor on how people will interpret warning
information, make decision, behave, or seek information in a future disaster. Baker (1987), for
example, studied a Florida community that underwent two evacuations. During the first evacuation,
the community was forced to evacuate during what was determined to be a false alarm. During the
second evacuation, people’s evacuation rates were similar to the previous evacuation. Having
undergone a past false alarm evacuation did not impact evacuation during a second hurricane. Other
studies, however, have argued that people who live in areas that frequently experience severe weather
(e.g., winter storms, hurricanes) can become complacent and are less likely to heed evacuation
recommendations in a future disaster (Windham et al., 1977). Some studies have also shown that past
experience with disaster can prompt people to heed evacuation recommendations (Lindell & Perry,
2004).

This study’s findings, hence, demonstrate the need for practitioners to be wary of relying on
past experience as a predictor of how people will behave in a future disaster. In a future New Orleans
hurricane, the experience of Hurricane Gustav (which some saw as a false alarm while others did not)
may or may not influence evacuation preparedness. My findings reveal the limitations of evacuation
preparedness programs. Practitioners can do their best to address needs (e.g., information and
resources) prior to a disaster. How people behave during a disaster, however, is often unpredictable.
Hence, instead of trying to predict or make claims regarding how people will behave in a future
disaster, a more useful approach is to address gaps (identified using the PADM) while steering clear of problems that can arise from prediction.

Demographic characteristics and disaster: An important finding from this study was that mobility impaired individuals who rely on para-transit were more likely to take preparedness actions than vehicle-less individuals. The temptation, from this finding, is to generalize to the larger population of mobility impaired individuals. However, this would be problematic. One of the major pitfalls of using demographic characteristics (e.g., race, ethnicity, level of income, presence or absence of disability) to predict preparedness behavior is that demographic characteristics are often a poor predictor of how people will behave. Bolin (2007) review of research on demographic characteristics and disaster reveals that over the ages, there have been numerous findings, often contradictory, on how demographic characteristics affect preparedness actions. The reason for these often contradictory finding is that in many research projects, socio-demographic categories (e.g., low-income African Americans, recent Hispanic Immigrants) are often viewed as homogeneous clusters. In reality, these clusters are filled with diverse individuals with different occupations, levels of education, and other characteristics. A person living in a low income urban neighborhood is not simply a low income individual: she may also be a teacher, church member, member of an association, community leader, and volunteer.

In many cases, what shapes an individual’s disaster preparedness behavior is not simply ethnicity, race, or disability status but the immediate context he or she is in (e.g. the financial, technological, or institutional barriers they face and the cultural beliefs they hold). With that said, people from particular demographic groups (e.g., racial-ethno linguistic minorities, mobility impaired who rely para-transit) do face challenges preparing for disasters. However, the emphasis of emergency managers should be on understanding the context during which preparedness will take place instead of just looking at an individual’s race/ethnic background or disability status.
This study’s findings regarding mobility impaired individuals who rely on para-transit should be understood using Kaile and Enders (2007) framework of functional needs explained earlier in the literature review. The authors argued that a key step to developing effective preparedness programs that can assist individuals with disabilities in disaster is to move away from the vague concept of “special needs.” They note that people with disabilities are diverse and “have the same range of personality traits, interests, and desires as everyone else (p. 232).” Disability, they point out, exists on a continuum. There are people who have disabilities who do not consider themselves disabled and there are people who have disabilities but who do not know it. Traditionally, individuals with disabilities have been labeled based on the disability they have (e.g. blind, deaf, quadriplegic). Kailes and Enders pointed out that these labels say little about how a person will deal with a disaster. Two individuals who utilize a wheel-chair may deal with a disaster differently, one being able to manage the disaster well, another being overwhelmed by a disaster. In addition, disability is not limited to “wheelchair users, people who are blind or deaf, or individuals covered by the ADA (Kailes & Enders, p. 233).” In a disaster situation, people who have undergone surgery are pregnant, or who are healing broken limbs can be considered disabled. A disaster can also create new individuals with disabilities.

Disaster managers, when attempting to understand the role of disability in a disaster, should not focus on categorizing different types of disability into special groups. The complex and diverse nature of disability means that you can’t make assumptions based on labels. In this project, I interviewed people with mobility impairments who rely on para-transit. However, there are many so-called normal non-disabled people who will need help with disabilities that emerge after a disaster. An individual who uses a wheelchair maybe fine getting around after a disaster but may need help dealing with trauma. Narrowly categorizing people into groups based on their disability (and planning disaster response solely on this) can result in ineffective disaster management. Readers, hence, should be careful about drawing conclusions about mobility impaired individuals from my work and then
generalizing/creating preparedness programs based on the findings.

What I recommend is that those tasked with assisting the transportation disadvantaged for disaster heed the advice of Kailes and Enders and adopt a function based approach toward disaster preparedness for the transportation disadvantaged. Kailes and Enders created their framework thinking about issues of disability and disaster. However, their framework can be adapted to other transportation disadvantaged populations. Instead of trying to fit the transportation disadvantaged into narrow special groups, communities should focus on meeting key function needs that need to be met during disaster. By focusing on functional needs, a community can ensure that various groups in the community (e.g. those with pre-existing challenges, those whose challenges emerge during a disaster) are helped during a disaster. A functional-based approach reflects the diverse nature of being transportation disadvantaged and recognizes that there is no one size fits all approach for people who are transportation disadvantaged.

Communities adopting a function-based approach should begin by ensuring that their disaster management programs meet the communication needs that emerge during a disaster. Disaster programs should be designed so that those who have difficulty communicating in the disaster context (e.g. hearing, seeing, and understanding) can access services. Communities should also ensure that their disaster programs meet the various medical needs that emerge during a disaster. Community disaster management plans should include provisions on how to assist people with chronic illness, who are wounded, on portable-oxygen, and requiring life-support systems. Addressing medical needs can reach many who self-identify as disabled, those who do not consider their conditions as a disability, those who become disabled during a disaster, and those whose conditions are worsened by a disaster.

In addition, communities should also ensure that their disaster programs meet the various independence needs that emerge during a disaster. Community disaster management plans should include provisions on how to assist people who require help with tasks such as “bathing, feeding, going
to the toilet, dressing, and grooming (Kailes & Enders, p. 235).” Addressing independence needs can help those who needed help being independent prior to a disaster or those who require assistance remaining independent after a disaster. Communities should also ensure that their disaster programs meet the various supervision needs that emerge after a disaster. These include provisions on how to assist people who require supervision during a disaster such as children, Alzheimer’s patients, individuals traumatized/depressed due to the disaster, and others who need help coping with the disaster’s aftermath. Lastly, communities should also ensure that their disaster programs meet the various transportation needs that emerge during a disaster. Community disaster management plans should include provisions for how zero-vehicle households, wheel-chair users, the elderly, the blind, and other non-drivers will be evacuated out of the disaster zone and how they will be returned during recovery. The findings on mobility impaired individuals in this study, hence, should be understood within this larger framework and when programs are being created, the knowledge should be used in a manner that is function based instead on one that pigeon halls people into a particular category and attempts to predict their behavior based on physical characteristics.

Suggestions for Future Research

This project highlighted several areas of future study that can be addressed. The first is whether the Protective Action Decision Model can be utilized as a platform for planning campaigns. In this study, PADM was used a means of assessing whether a campaign had gaps. What emergency management practitioners desire, however, are models that they can use to construct campaigns with some certainty that the campaigns will succeed. Highlighting flaws in a campaign, like I did in this project, is fine. However, what emergency managers are often looking for are step-by-step guides on how to plan and implement a preparedness campaign. Research, therefore, needs to be conducted to ascertain whether a campaign planned using the PADM as a guideline actually results in enhanced preparedness. This research can be done in communities where publics have been lax in following the
recommendations of preparedness campaigns. Preparedness campaigns based on the PADM can be implemented and researchers can measure whether publics are engaging in protective action implementation.

A second area of research that is needed is whether the Situational Theory of Problem Solving can be utilized as a platform for planning campaigns. In this study, the Situational Theory of Publics was shown to echo the ideas of the PADM and hence, can serve as a means of assessing communication gaps in a campaign. The Situational Theory of Problem Solving has been crafted to address the limitations of the Situational Theory of Publics. As noted earlier, what emergency management practitioners desire, however, are directions that they can use to construct campaigns with some certainty that the campaigns will succeed. Highlighting flaws in a campaign, like I did in this project, is fine but emergency managers are often looking for step-by-step guides on how to plan and implement a preparedness campaign. Research, therefore, needs to be conducted to ascertain whether a campaign planned using the Situational Theory of Problem Solving as a guideline actually results in enhanced preparedness. This research can be done in communities where publics have been lax in following the recommendations of preparedness campaigns. Preparedness campaigns based on the Situational Theory of Problem Solving can be implemented and researchers can measure whether publics are heeding recommendations on how to prepare for a disaster.

A third area that needs study is the issue of past experience and disaster. This study’s findings reflected past findings which illustrate that it is hard to predict how past experience influences disaster behavior. Existing studies show contradictory findings regarding past experience and disaster. To shed light on these critical issues, what are needed are longitudinal studies that examine individuals starting at a particular disaster experience and then examine their behavior in a future disaster. What is needed is a better understanding of people’s pre-disaster views toward preparedness, how they are affected by a first disaster and how in a subsequent disaster, they are affected. Studies, hence, should
examine how an individual “grows” in terms of disaster knowledge (and disaster related behaviors) as times passes by. This approach, in my perspective, can shed light how exposure to multiple disasters transforms their preparedness behaviors.

Study Limitations

This study has four limitations that should be noted. The first two limitations can be termed addressable limitations because I was able to take measures to counter them. The first addressable limitation was that in order to gain an understanding of how the CAEP program was run (in particular, whether it manifested the characteristics of excellence), decision makers close to the program were the primary source of data. The perspective of decision makers, however, can differ significantly from those who are familiar with the program from the outside. To avoid obtaining a limited view of the CAEP program, I also examined secondary documents (e.g., surveys, reports by external researchers) to gain an understanding of how the CAEP program was run. A second addressable limitation was that since I was the primary person analyzing the participants’ responses, it is possible my views (e.g., past disaster management work) shaped or skewed my interpretations. To address this limitation, I relied on the participants and other experts on disaster to review my conclusions to determine whether what I was concluding matched with what the participants were trying to convey in their responses.

The remaining limitations can be labeled difficult limitations because I found it hard to address them. The first difficult limitation was that the sample was fairly homogenous. Among the transportation disadvantaged participants, only two were not African American. This homogeneity reflects the downtown wards of New Orleans from which the majority of the participants were from. New Orleans, however, has other vulnerable populations that merit study. In addition to low-income Whites, the city also has a sizeable population of immigrants from Central/South America, Southeast Asia (e.g. Vietnam), and the Caribbean region (e.g. Haiti). A portion of this population is transportation disadvantaged and the CAEP campaign has carried outreach efforts to reach these
groups. I attempted to recruit participants from these groups but did not succeed. In hindsight, cultural appropriate recruitment materials (e.g. in Spanish or Vietnamese could have helped in securing participants). Forming partnerships with leaders in these communities could have helped.

A second difficult limitation was the low participation rate among individuals in charge of the CAEP campaign. Although I was able secure two participants, five or more participants could have been ideal. I attempted to widen the recruitment email to reach other individuals familiar with the running of CAEP but the response rate was abysmal. In hindsight, instead of approaching the decision makers directly, I should have recruited a senior person in the New Orleans government who could have introduced me to these individuals. Having someone lobby for me would have helped in securing additional participants.
REFERENCES


Baird, E. (2010). The “phases” of emergency management. Paper prepared for the Intermodal Freight Transportation Institute, University of Memphis


Assessment.


APPENDIX A: RECRUITMENT FLYER

VOLUNTEERS NEEDED FOR RESEARCH STUDY
Public Relations and Transportation Preparedness in New Orleans

About the Study:
We are looking for participants for a study of how the city of New Orleans is preparing people without cars for future hurricanes and other disasters.
This study is being conducted by Owen Kulemeka of the Department of Advertising at the University of Illinois at Urbana Champaign.

Who is eligible?
Any New Orleans resident 18 years or older is welcome to participate. Those who rely mainly on mass transit (e.g. buses, street cars) for transportation are encouraged to participate.

What will those who sign up for the study do?
They will be interviewed for 1 hour. Questions will focus on what they know about preparing for a disaster and what they know about evacuating New Orleans if they do not have a personal vehicle.
Compensation will be available.
If you are interested in participating, please call: 217-689-1351

More information about this study can be obtained at:
Owen Kulemeka at okuleme2@illinois.edu or 217-689-1351
APPENDIX B: RECRUITMENT EMAIL

Thank you for reading this email. We are looking for participants for a study of how the city of New Orleans preparing people without cars for future hurricanes and other disasters. This study is being conducted by Owen Kulemeka of the Department of Advertising at the University of Illinois at Urbana Champaign.

Who is eligible?
Those who have a played a role in organizing and publicizing the New Orleans City Assisted Evacuation Plan are encouraged to participate. They need to be 18 years or older.

What will those who sign up for the study do?
They will be interviewed for about 1 hour. Questions will focus on how the City of New Orleans is preparing people who rely buses, streetcars, and other public transportation for disaster evacuation. Compensation will be available.

If anyone in your office is interested in participating, please ask them to call: 217-689-1351
More information about this study can be obtained at:
Owen Kulemeka at okuleme2@illinois.edu or 217-689-1351
APPENDIX C: QUESTIONS FOR THE TRANSPORTATION DISADVANTAGED

Question 1
Do you live in the city of New Orleans?

Question 2
If YES, how long have you lived in the city?

Question 3
If NO, where do you live?

Question 4
How long have you lived at this location?

Question 5
Since Hurricane Katrina, a lot of people have talked a lot about being prepared for a hurricane. How would you describe being prepared for a hurricane?

Probes:
Depending on the answer, the following probes will be used to elicit more information from the participant. These probes will be utilized for all the questions outlined below if necessary:
- Probes for clarification when a participant uses unclear term or makes unclear statement:
  - Can you explain what you mean by [unclear term or statement will be inserted]?
  - When you say, [unclear term or statement will be inserted], what do you actually mean?
  - It sounds like you are saying [explanation inserted], is that a fair summary?

Probes to obtain more details:
- Tell me more about that.
- Can you give me an example?

Probes to understand feelings, rationale, and thoughts:
- Why is this important to you?
- Why does that stand out in your memory?
- Why do you think you noticed that?
- Why does that matter?
- What motivated your response?
- How do you feel about that?
- What is significant about this to you?

Probes to understand feelings, rationale, and thoughts:
- Do you always respond this way?
- What might make you respond differently?
- Have you always felt this way?
- How has your approach changed over time?
- What motivated this change?

Probes to clarify views by presenting an opposite perspective:
- I heard about a person who does the following [description inserted].
What do you think of about this way of doing things?
In the past, I have interviewed people who have stated that [[description inserted].
What do you think about that idea?
I recently read about people who [description inserted]. How would you feel about this?
Suppose you were asked to [description inserted]. How would you respond to that idea?

Question 6
Community-wide disasters happen, and these happen for a variety of reasons, such as acts of nature, terrorism, industrial accidents, and other causes. As you think about your lifetime, what major community-wide disaster, if any, has affected you? Can you tell me about it?

Question 7
Did it affect your finances? If so, how – could you tell me about that?

Question 8
Can you tell me, did it affect your peace of mind? How do you feel about that?

Question 9
What effect, if any, did it have on your trust in government? What motivated this change?

Question 10
Did it affect your health at all? Can you tell me a bit more about that?

Question 11
In the past year, have you developed an emergency plan? If so, can you tell me about it? If not, do you think you will develop a plan for an emergency? If you have no plans to develop an emergency plan, please explain why?

Question 12
In the past year, have you sought more information on how to evacuate during a hurricane? If so, when did you do that? From which sources? What did you learn? If no, why have you not sought more information?

Question 13
In the past year, have you stockpiled items food medicine? If so, why have you done this? What kinds of items have you stockpiled? If no, why haven’t you done so?

Question 14
In the past year, have you stockpiled items medicine? If so, why have you done this? What kinds of items have you stockpiled? If no, why haven’t you done so?

Question 15
In the past year, have you duplicated important documents? If yes, what has motivated you to do this? If no, why haven’t you done so?

Question 16
In your view, how useful is developing an emergency plan?
Question 17
In your view, how useful is seeking more information on how to evacuate during a hurricane?

Question 18
In your view, how useful is stockpiling food?

Question 19
In your view, how useful is stockpiling medicine?

Question 20
In your view, how useful is duplicating important documents?

I am now going to show you a flyer about preparing for a hurricane? The flyer is attached. Please take a look at it.

Question 21
Have you seen this flyer before?

Question 22
What do you think the creators of this flyer are trying to tell people?

Question 23
How easy is it for you to understand the information on this flyer?

Question 24
How important do you think the message of this flyer is to you?

Question 25
How much do you believe what the flyer is trying to tell you?

Question 26
I am going to show another flyer about preparing for a hurricane? The flyer is attached. Please take a look at it.

Question 27
Have you seen this flyer before?

Question 28
What do you think the creators of this flyer are trying to tell people?

Question 29
How easy is it for you to understand the information on this flyer?

Question 30
How important do you think the message of this flyer is to you?

Question 31
How much do you believe what the flyer is trying to tell you?
Question 32
Please think about information that you have received about evacuating New Orleans during a hurricane if you do not have a car. This does not include information that you actively went looking for. From whom have you heard about evacuating New Orleans during a hurricane if you do not have a car?
Friends
Relatives
Employers
Scientists
School officials
TV reporters
Radio reporters
Entertainers
The City of New Orleans
What other sources?

Question 33
How was the information about evacuating New Orleans without a car communicated to you?
Did you read it in the newspapers?
Did you read it in other print media?
Did you see it on the television?
Did you hear it on the radio?
Did you see it on the Internet?
Was it communicated to you in face-to-face discussions?
Was it communicated to you some other way?

Question 34
Of the information you received about evacuating without a car, how much of it was from a government agency? Would you say all of it, some of it, or none of it? Can you describe the information?

Question 35
Of the information you received, how much of it was from a charity organization like the Red Cross. Would you say all of it, some of it, or none of it? Can you describe the information?

Question 36
Since Hurricane Katrina, about how frequently have you heard information about preparing for evacuation if you do not have a car?
At least daily
At least once a week
At least once a month
At least once a year
Never

Question 37
How easy to understand was the information you have heard about evacuating if you do not have a car? Would you say not easy to understand, completely easy to understand, or somewhere in between? Please explain your choice.
Question 38
How much of the information that you heard about evacuating if you do not have a car did you believe? Would you say you did not believe any of it, believed all of it, or somewhere in between. Please explain your choice.

Question 39
How likely is it that in the next 6 months you will do something more to prepare for evacuating New Orleans without a car? Would you say it is extremely unlikely, somewhat unlikely, somewhat likely, or extremely likely that you will do something? Please explain your choice.

Question 40
How likely is it that in the next 30 days you will do something more to prepare for evacuating New Orleans without a car? Would you say it is extremely unlikely, somewhat unlikely, somewhat likely, or extremely likely that you will do something? Please explain your choice.

In the next couple of questions I am going to ask you what you think about some different groups and individuals.

Question 41
When the Governor of Louisiana gives information to the public about evacuating New Orleans without a car, how often do you think the information is complete? Would you say it is never complete, always complete, or somewhere in between? Or you don’t know. Please explain your choice?

Question 42
When the Mayor of New Orleans gives information to the public about evacuating New Orleans without a car, how often do you think the information is complete? Would you say it is never complete, always complete, or somewhere in between? Please explain your choice.

Question 43
How much do you know about the different ways to evacuate New Orleans if you do not have a car? Would you say you know nothing, know a lot, or somewhere in between. Please explain your choice.

Question 44
How much do you know about what the city government of New Orleans has done to prepare for the evacuation of residents without cars? Would you say you know nothing, know a lot, or somewhere in between. Please explain your choice.

Question 45
How much do you know about what you can do to prepare for evacuating without a car? Would you say you know nothing, you know a lot, or somewhere in between? Please explain your choice.
**Question 46**
How much do you know about you can do to get information when a hurricane evacuation order has been announced?
Would you say you know nothing, you know a lot, or somewhere in between? Please explain your choice.

**Question 48**
How likely is it that a hurricane evacuation will occur in the next 12 months?
Would you say not at all likely, very definitely will occur, or somewhere in between. Please explain your choice.

**Question 49**
If an evacuation were to occur, how serious do you think the impact on your life would be?
Would you say not at all serious, extremely serious, or somewhere in between. Please explain your choice.

**Question 50**
How much do you know about how to protect yourself during an evacuation for those without cars.
Would you say you know nothing, you know a lot, or somewhere in between? Please explain your choice.

**Question 51**
Now I want to know if you have actively looked for information about preparing for an evacuation if you do not have a car. After Hurricane Katrina, how frequently have you tried to get information about evacuating New Orleans without a car?
At least daily
At least weekly
At least once a month
At least once a year
Never

**Question 52**
Did you actually get any information?

**Question 53**
Did you understand the information that you got?

**Question 54**
Did you think about the information that you got?

**Question 55**
Did you discuss the information that you got with other people?

**Question 56**
How sure are you that you could effectively evacuate yourself if a hurricane evacuation was announced?
Would you say not at all sure, extremely sure, or somewhere in between? Please explain your choice.
**Question 57**
How sure are you that the city of New Orleans government could effectively evacuate you if a hurricane evacuation was announced?
   Would you say not at all sure, extremely sure, or somewhere in between? Please explain your choice.

**Question 58**
How sure are you that the state of Louisiana government could effectively evacuate you if a hurricane evacuation was announced?
   Would you say not at all sure, extremely sure, or somewhere in between? Please explain your choice.

**Question 59**
How sure are you that the federal government could effectively evacuate you if a hurricane evacuation was announced?
   Would you say not at all sure, extremely sure, or somewhere in between? Please explain your choice.

**Question 60**
What type(s) of transportation do you mainly use to travel in New Orleans?
   - My personal vehicle
   - Local bus service
   - Streetcar
   - Express bus service
   - Mini-bus
   - Private car
   - Social service
   - Taxi service
   - Hired driver for private car
   - Friend’s car
   - Motorcycle
   - Bicycle/tricycle
   - Walk (with cane/walker)
   - Walk (without cane/walker)
   - Paratransit Van
   - Volunteer driver
   - Other Please specify

**Question 61**
Do you need assistance when using this transportation?

**Question 62**
If you do need assistance, who assists you?
   - Spouse/significant other
   - Mother or Father,
   - Child
   - Other relative
Roommate/neighbor
Friend
Hired assistant
Volunteer assistant
Co-worker
Other please specify

Question 63
How would you rate the availability of public transportation in New Orleans?
Excellent; good; average; poor. I don’t know? Please explain your choice.

Question 64
How would you rate the New Orleans Regional Transit Authority (RTA) bus service?
Excellent; good; average; poor. I don’t know? Please explain your choice.

Question 65
How would you rate the New Orleans Regional Transit Authority (RTA) streetcar service?
Excellent; good; average; poor. I don’t know? Please explain your choice.

Question 66
How would you rate the New Orleans Regional Transport Authority (RTA) bus service on each of the following attributes?

<table>
<thead>
<tr>
<th>Attribute</th>
<th>Excellent</th>
<th>Good</th>
<th>Average</th>
<th>Poor</th>
<th>I don’t know</th>
</tr>
</thead>
<tbody>
<tr>
<td>Convenient schedule</td>
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<td></td>
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<tr>
<td>Ticket price</td>
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<td>On-time departure</td>
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<tr>
<td>Bus driver/attendant service</td>
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<tr>
<td>Cabin cleanliness</td>
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</tr>
<tr>
<td>Seat comfort</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Question 67
Do any of the following difficulties with using public transit apply to you?
Need special aid in order to move around
Difficulty in standing
Difficulty in walking to curb to meet transit vehicle
Some difficulty in climbing stairs (need assistance)
Cannot read newsprint or transit schedules
Have difficulty in reading signs or vehicle route numbers
Cannot hear announcements over the public address system
Having difficulty understanding the announcements
Other (What?)

Question 68
When using public transportation, how concerned are you with:
Having to wait for transportation
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
The length of the travel time
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Crowding
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Lack of Kindness by others
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Not being sure of arrival time at destinations
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Lack of connecting to other transportation systems
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Lack of bus service to places you need to visit
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Having to cross streets or get to distant points for destinations
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Difficulty finding the bus stop or entrance for transit
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Having to negotiate narrow doors to enter a bus or streetcar
very concerned, somewhat concerned, somewhat unconcerned, very unconcerned. I don’t know.
Having to negotiate steps to enter a bus or streetcar

Question 69
If a hurricane evacuation is announced, would you use the evacuation transportation the city of New Orleans provides for people without cars?
I definitely will not
I probably will not
I probably will
I definitely will
I don’t know.

Question 70
If yes, why would you use the transportation?

Question 71
If no, why would you not use the transportation?

Now I would like to ask some background information about you.

Question 72
First, what is your current marital status? Are you:
ever married
married
living together as married
divorced
separated
widowed?

Question 73
What was your age on your last birthday?

Question 74
What is the highest grade in school you completed and received credit for?
**Question 75**
Are you of Hispanic, Latino, or Spanish Origin?

**Question 76**
If YES, would describe yourself as:
- Mexican, Mexican American, Chicano
- Puerto Rican
- Cuban
- Other (for example Argentinian, Colombian, Nicaraguan, Salvadorian, Spaniard, and so on).

**Question 77**
Which ONE of these racial groups best describes you? Would you say:
- White
- Black, African American, or Negro
- American Indian or Alaska Native
- Asian Indian
- Japanese
- Native Hawaiian
- Chinese
- Korean
- Guamanian or Chamorro
- Filipino
- Vietnamese
- Other Pacific Islander (for example Fijian, Tonga). Please describe group.
- Other Asian (for example, Hmong, Laotian, Thai, Pakistani, Cambodian) Please describe group.
- Some other race. Please describe group.

**Question 78**
What is your current employment status? Are you:
- Working full-time
- Working part-time
- Unemployed
- Retired
- Homemaker
- A student
- Something else

**Question 79**
As I read the following income categories, would you please tell me which one includes the total income of your household before taxes in 2009?
- Less than $15,000
- $15,000 to less than $25,000
- $25,000 to less than $35,000
- $35,000 to less than $50,000
- $50,000 to less than $75,000
- $75,000 to less than $100,000
- $100,000 to less than $150,000
- $150,000 or more

I have reached the end of the interview. Do you think there are important questions about evacuating without a car that I should have asked about, or topics we should have covered but didn’t in this interview? What else should I have asked about?
APPENDIX D: QUESTIONS FOR CAMPAIGN DECISION MAKERS

**Question 1:**
How long have you worked with your current organization?

**Question 2:**
How would you describe your responsibilities in the Evacuteer organization?

**Question 3:**
Before creating the City Assisted Evacuation Plan program (CAEP), what type of research did the city's emergency managers conduct on how to create such a program?

**Question 4:**
If research was not conducted prior to creating the CAEP program, why do you think this was the case?

**Question 5:**
What tools have been used to make New Orleans residents aware of the CAEP program?

**Question 6:**
After the 2010 hurricane season, how did the city of New Orleans measure the success of the CAEP program?

**Question 7:**
If the city did not measure the success of the CAEP program after the 2010 hurricane season, why was this the case?

**Question 8:**
In your view, do New Orleans city officials in charge of emergency preparedness have a direct line to the leaders of the city? In other words, can they talk to the mayor and other senior leaders without having to grow through junior staff?

**Question 9:**
In your view, do the transportation disadvantaged in New Orleans give input into how the CAEP program is run? If yes, in what way(s)?

**Question 10:**
If the transportation disadvantaged in New Orleans do NOT give input into how the CAEP program is run, why do you think this is the case?

**Question 11:**
Some people describe the purpose of a disaster preparedness program like CAEP as getting city residents to follow the advice of expert emergency managers. Would you say this definition matches the goal of the CAEP program? If yes, why do you say so? If no, why does it not match the goal of the CAEP program?
Question 12:
Some people describe the purpose of disaster preparedness program like CAEP as a conversation between city residents and emergency managers. Instead of just telling people what to do, emergency managers listen to the concerns people and create preparedness programs based on these concerns. Would you say this definition matches the goal of the CAEP program? If yes, why do you say so? If no, why does it not match the goal of the CAEP program?

Question 13:
In your view, when leaders of the City of New Orleans are deciding the city's budget, how much importance is given to the needs of the CAEP program?

Question 14:
One emergency manager once told me that when there is a budget cut in her city, it is usually the disaster preparedness program that are cut. Would you say this statement matches the status of disaster preparedness in New Orleans? If yes, why do you say so? If no, why does it not match?

Question 15:
In your view, does the City of New Orleans government strive to listen and engage in dialogue with its residents?

Question 16:
Do city leaders consult the city's emergency preparedness staff before major disaster preparedness decisions are made?

Question 17:
In your view, is the City of New Orleans government an organization in which junior staff can easily get their views heard by those at the top?

Question 18:
In your view, is the City of New Orleans government an organization in which employees are encouraged to speak up?
APPENDIX E: RESEARCH APPROVAL FORM

UNIVERSITY OF ILLINOIS
AT URBANA-CHAMPAIGN

Office of the Vice Chancellor for Research
Institutional Review Board
528 East Green Street
Suite 203
Champaign, IL 61820

August 10, 2010

Michelle Nelson
Advertising
103 Gregory Hall
810 South Wright St.
M/C 462

RE: Public relations and transportation preparedness in New Orleans
IRB Protocol Number: 10725

Dear Michelle:

Your response to stipulations for the project entitled Public relations and transportation preparedness in New Orleans has satisfactorily addressed the concerns of the UIUC Institutional Review Board (IRB) and you are now free to proceed with the human subjects protocol. The UIUC IRB approved, by expedited review, the protocol as described in your IRB-1 application with stipulated changes. The expiration date for this protocol, UIUC number 10725, is 08/02/2011. The risk designation applied to your project is no more than minimal risk. Certification of approval is available upon request.

A copy of the enclosed date-stamped consent form must be used in obtaining informed consent. If there is a need to revise or alter the consent form, please submit the revised form for IRB review, approval, and date-stamping prior to use.

Under applicable regulations, no changes to procedures involving human subjects may be made without prior IRB review and approval. The regulations also require that you promptly notify the IRB of any problems involving human subjects, including unanticipated side effects, adverse reactions, and any injuries or complications that arise during the project.

If you have any questions about the IRB process, or if you need assistance at any time, please feel free to contact me or the IRB Office, or visit our Web site at http://www.irb.illinois.edu.

Sincerely,  

[Signature]

Sue Keenh, Director, Institutional Review Board

Enclosure

c: Owen Kulemeka
APPENDIX F: CONSENT FORM

Title of Project: Public Relations and Transportation Preparedness in New Orleans
Responsible Principal Investigator: Dr. Michelle Nelson
Other Investigator(s): Owen Kulemeka

Purpose of the Study: You are being asked to take part in a research study of what residents in New Orleans know about how to evacuate during a disaster without using a personal vehicle. The study will also examine how people are being warned about how to prepare for evacuation. This study is being conducted by Dr. Michelle Nelson and Owen Kulemeka from the Department of Advertising at the University of Illinois at Urbana Champaign.

What we will ask you to do: If you agree to be in this study, we will conduct an interview with you. The interview will include questions about what you know about preparing for a disaster, what you know about evacuating New Orleans if you do not have a personal vehicle, and how satisfied you are with the city’s disaster preparations. For those whose job is to warn people about preparing for a disaster, we will ask questions about how your organization works and how it communicates with people. The interview will take about 1 hour and 45 minutes to complete. With your permission, we would also like to audiotape record the interview.

Risks and benefits: We do not anticipate any risks to you participating in this study other than those encountered in day-to-day life. There are no benefits to you. Preparing for disasters is an important issue for the city of New Orleans and we hope to learn more about this critical topic.

Your answers will be confidential: The records of this study will be kept private at the University of Illinois at Urbana Champaign. In any sort of report we make public we will not include any information that will make it possible to identify you. Research records will be kept in locked safety boxes and locked rooms. Only the researchers will have access to the records. We will keep the recordings and transcripts for 3 years.

Taking part is voluntary: Taking part in this study is completely voluntary. You may refuse to answer any question that you do not want to answer. If you feel uncomfortable, you are free to withdraw at any time. If you decide not to take part in this study or refuse to answer certain questions, it will not affect your current or future relationship with the University of Illinois at Urbana Champaign.

Compensation: If you participate, you will receive a Winn Dixie Grocery Store gift card worth US $5. You do not have to complete the interview to receive the compensation. Whether you complete the interview or choose to withdraw at any time during the interview, you will receive a Winn Dixie Grocery Store Gift card worth US $5.

Distribution of findings: What we find in this research will be printed in a PhD dissertation and in an academic journal article.

Questions: If you have questions about this project, you may contact Dr. Michelle Nelson or Owen Kulemeka at 217-689-1351 or pnelsong@illinois.edu or okulemc2@illinois.edu. If you have any questions about your rights as a research participant in the study, please contact the University of Illinois Institutional Review Board at 217-333-2670 (collect calls accepted if you identify yourself as a research participant) or via email at irb@illinois.edu. You will be given a copy of this consent form for your records.

Please check one box:

- I agree to have this interview audiotape recorded.
- I do not want to be audiotape recorded.

* I am 18 years of age or older.
* I have read and understand the above consent form and voluntarily agree to participate in this study.

Participant Signature __________________________ Date ____________

UNIVERSITY OF ILLINOIS APPROVAL COPY

AUG - 2 2011
APPENDIX G: CITY ASSISTED EVACUATION PLAN BROCHURE 1

What is the CAEP?

The City-assisted Evacuation Plan (CAEP) is a program designed to help people who have no means of evacuating on their own. This may be due to financial need, unreliable or no transportation, or homelessness. If you feel you may be eligible for the CAEP, call the City's 311 hotline or the 800 numbers listed on the back of this brochure and answer the phone survey. If you are eligible for the CAEP, you will be notified via phone and your information kept in a database for registration during evacuation.

Important information for CAEP Users:
- If any information changes after you have registered, please call 311 to update those changes.
- Bring identification with you when you evacuate including State-issued license or ID card. If you do not have any documentation, you will NOT be turned away.
- Bring only 1 small carry-on bag per person (no more than 45” total dimensions). Pet carriers, purses, and diaper bags will not count as your one bag.
- Bring your medicines and prescriptions (must be in their original bottles or packages).
- Bring important papers for safekeeping.
- Bring cash with you. Banks at evacuation locations may be unable to process debit or credit cards. Bring a book of checks to use.
- Those with special medical physical or psychological needs should consult physicians, counselors, home health care agencies, and service providers to arrange care where they are going.
- The elderly, mobility-impaired and those that need medical resources should go to a CAEP senior center for evacuation pickup. These have mobility access and are staffed to assist people with non-routine concerns. All others should report to a general pickup point listed inside.
- Those transported to special needs shelters will only be allowed to bring one caretaker with them.
- If you bring a pet during CAEP, it must have ID, collar, leash, be up to date on vaccines, and have any needed medications.

NO WEAPONS, ALCOHOL, OR DRUGS WILL BE ALLOWED. ALL SUCH ITEMS WILL BE CONFISCATED.

For more information on the CAEP or emergency planning:
- 1-877-286-6431
- 1-800-981-NOLA (TVY)
- www.nola.gov

To register for the city emergency alert system:
- Call 311
- Text message NOLA4U

City Assisted Evacuation Plan
( CAEP )

A Guide to Accessing the CAEP

ONE NEW ORLEANS
Rethink * Renew * Revive
C. Ray Nagin, Mayor
APPENDIX I: CITY OF NEW ORLEANS ORGANIZATIONAL CHART